1	BEFORE THE NEW YORK STATE JOINT LEGISLATURE				
2	LEGISLATIVE COMMISSION ON RURAL RESOURCES				
3	PUBLIC HEARING:				
4	TO IDENTIFY CURRENT BROADBAND NEEDS IN RURAL				
5	NEW YORK STATE, TO HEAR FROM RELEVANT STAKEHOLDERS FROM ACROSS THE STATE, AND TO LAY THE FOUNDATION FOR				
6	LEGISLATIVE INITIATIVES				
7					
8	Van Buren Hearing Room A Legislative Office Building, 2nd Floor Albany, New York				
9	Date: September 17, 2019				
10	Time: 11:00 a.m.				
11	PRESIDING:				
12					
13	Senator Rachel May Senate Co-Chair				
14	Assembly Member Angelo Santabarbara Assembly Co-Chair				
15					
16	Assembly Member Fred W. Thiele, Jr. Co-Sponsor				
17					
18	SENATORS PRESENT:				
19	Senator Pamela Helming				
20	Senator Daphne Jordan				
21	Senator Betty Little				
22	Senator Jen Metzger				
23	Senator Thomas F. O'Mara				
24	Senator Patty Ritchie				
25					

	4
1	SENATORS PRESENT (continued):
2	Senator James L. Seward
3	Senator James N. Tedisco
4	
5	ASSEMBLY MEMBERS PRESENT:
6	Assembly Member Jake Ashby
7	Assembly Member David Buckwald
8	Assembly Member Billy Jones
9	Assembly Member Brian Miller
10	Assembly Member John Salka
11	Assembly Member Robert Smullen
12	Assembly Member Dan Stec
13	Assembly Member Chris Tague
14	Assembly Member Carrie Woerner
15	
16	
17	
18	
19	
20	
21	
22	
23	
24	
25	

			4
1	SPEAKERS (Continued):	PAGE	QUESTIONS
2			~
3	Gretchen Hanchett Executive Director Greater Allegany Chamber of Commerce	220	224
4	David Wolff	227	236
5	Chair Adirondack Action Broadband Committee	221	230
6			
7	Tim Johnson CEO Otsego Electric Cooperative	241	251
8		0.41	251
9	Bryan Dillon General Manager Steuben Rural Electric Cooperative	241	251
10	Keith Pitman	241	251
11	CEO Oneida-Madison Electric Cooperative	2 <b>4</b> 1	251
12		262	267
13	Dr. Todd Schmit Associate Professor Charles H. Dyson School of	262	267
14	Applied Economics and Management - Cornell College of Ag and		
15	Life Sciences and SC Johnson College of Business		
16	David Berman	269	281
17	Co-Chair Connect Columbia		
18	Annabel Felton	269	281
19	Chair Duanesburg Broadband Committee	200	201
20	_		0.0.5
21	Robert Puckett President NYS Telecommunications Assoc.	293	297
22			
23	Thomas Ciaccio Superintendent Fonda-Fultonville Central	306	324
24	School District		
25			

SENATOR MAY: Welcome, everybody, to the public hearing on rural broadband.

I'm Senator Rachel May from the 53rd Senate District, which includes Syracuse, but also a lot of rural Onondaga County and all of rural Madison County. And I chair the Legislative Commission on Rural Resources, together with Assemblyman Santabarbara.

And I'm very pleased to host the first statewide hearing on rural broadband issues, together with Assemblyman Santabarbara and Assemblyman Thiele.

I first want to thank my colleagues in both chambers, and the many people that we will be hearing from today.

We have members and stakeholders from all across the state who are concerned about this issue.

And we can see here today, here on the dais, and on the witness list, just how broad the interest is in this -- in this issue.

And I want to welcome my colleagues,

Senator Metzger, Senator Jordan, Senator Ritchie,

Senator Seward, Senator Tedisco, Senator Helming,

and Senator Little is here too.

And I'll let Senator (sic) Santabarbara

introduce his colleagues.

So our witnesses' list spans the public and private sector.

We'll hear from agency leaders, citizen action committees, school superintendents, rural electric cooperatives.

The range of speakers mirrors the range of those invested personally and politically in the one thing we all seem to find it hard to live without, which is connectivity.

This is an issue that affects every person living in rural New York. Access to the Internet is vital to the success of our communities.

Without reliable high-speed Internet, kids can't do their homework, people can't work from home or successfully run their small businesses, and our rural schools, libraries, and communities are at a competitive disadvantage.

Bad Internet access can lead to lower home prices and less economic development.

And access to the Internet is also vital to our democracy; it is how we get information.

And, in the coming years, it's going to be how the government runs the census. And without access to the Internet, it's going to be harder for

people to be counted in the census.

So, for all of these reasons, we really need to get a handle on this problem.

I look forward to today's discussions.

I hope we'll see thoughtful discussion of how we build on the progress that's already been made.

And the State has done a great deal so far.

And, it will learn what the Legislature needs to do to ensure that all New Yorkers are fully, adequately, and equitably served.

So about five years ago New York made a commitment to invest in rural broadband, and there is no question that more people are being served now than they were in 2015.

This hearing is a stock -- a chance to take stock of those developments, to see where the successes have happened, but also to find out what we still need to do to ensure border-to-border broadband access in the state of New York.

I hear from constituents all the time about their problems. Either they have no access, or they're paying for -- for service that in no way measures up to what they are actually receiving.

And so I want to make sure that we are serving those people, and the constituents of my

colleagues up here, and people all over the state.

I want to do just a moment of housekeeping before we begin.

We've agreed that members can have opening remarks -- make opening marks of two minutes or less.

We're going to be strict about that because we want to make sure there's time for the witnesses to speak and for us to follow up with questions.

I also want to encourage my colleagues to focus on policy issues.

If you have very specific concerns about a constituent or a neighborhood that we can address in a more effective way outside of this hearing,

I encourage you to bring that information to my staff, and we'll be happy to pass it along to the -- to the right -- through the right channels.

A final reminder to everybody here:

Thanks to the Internet, this hearing is being live streamed, and can be viewed from the New York

State -- nysenate.gov website, yet another way that our democracy depends on Internet service.

And we want to make sure that everyone in New York can see this, so that is one of our goals here.

With that, I will pass it along to my colleague Assemblyman Santabarbara.

ASSEMBLYMAN SANTABARBARA: Thank you, Senator May, and thank you for your partnership on this commission.

I'm Assemblyman Angelo Santabarbara, and I'm pleased to co-chair this on the Assembly side, with Senator May.

I represent the 111th Assembly District, which includes areas of Albany, Montgomery, and Schenectady counties. A lot of the rurals areas we'll be talking about are in my district.

Some of my constituents are here, actually, to testify.

I want to thank -- the room is full, so

I want to thank everybody for attending, for making the time to be here.

Thank you to my Senate colleagues, my Assembly colleagues, for being here.

And, I think it's going to be a very productive hearing.

It's very crucial that we put this together because, as you heard, it's affecting many of the rural communities in New York State, and, again, many of the communities that I represent.

Lack of access to high-speed broadband has had a very significant impact. And we've heard over years, especially on the rural economies, economic competition, we heard about schools, businesses, households, they've all rely -- have come to rely, in this day and age, on Internet service, and the quality of that service.

Minimum broadband speeds, people struggle even to achieve that.

And it's a barrier for students in rural areas. It limits their research. It limits their college and career choices, and the list goes on.

There's also reports out there to show that, by increasing broadband in these areas, we can also increase employment in these areas. That's a fact at this point.

So we have to do a better job of making sure we're penetrating in these rural areas.

That being said, I -- as I said, I deal with this, as Senator May pointed out in her district as well.

I deal with this on a daily basis with calls, constituents that contact my office.

I know people here -- are here from -- representing the town of Duanesburg, that will be --

in Schenectady County, that will be testifying.

I've heard from them how lack of access is a real problem, it's a real issue.

So we'll hear more about that from people testifying today.

Just in rural areas across the state, broadband limitations, the main thing is education, but also, again, economic opportunities, including farming, which is a significant factor for our state, a significant economy in our state.

So we got to think about the farming industry, and how they also have come to rely on broadband services.

The New New York Broadband Program that was launched in 2015, we made a big investment in this, \$500 million. And we're looking to provide access to everyone in the state.

The program has a mission: to get to those unserved and underserved communities.

We've been through three rounds of funding at this point, and with the State's also taking advantage of federal funding from the FCC's Connect America Fund.

Some stats that are -- hopefully, we'll talk about today:

The Broadband Office estimates that, through the round three of the New New York Broadband Program, 99.9 percent of New Yorkers should have broadband access.

And the FCC data shows that New York State has 100 percent coverage.

So, despite what we're hearing, the fact is, and we're going to hear today, individuals -- individ -- not every individual and not every location has broadband.

That's what we're here to talk about today, and how we can address this situation, how that discrepancy can be addressed.

And it comes down to -- it comes down to how they determine who has access and who doesn't.

A 2019 congressional research service report identifies that this is over -- this overstatement is a significant issue, and I hope to address that during this hearing.

They -- base -- basically, a census block is considered served if there is broadband service, or the strong potential for broadband service, at one or more locations.

So you see the problem.

This is especially problematic in rural areas

which have large census blocks, and may be considered served even if a single neighbor -- a single neighborhood in that census block has broadband service.

So that's a real significant issue.

So that being said, I hope to talk more about this, and how we -- how the FCC's making some changes, to use shapefiles, and calling on carriers to look at that data closer. And also provide us an online portal that would give us a chance to dispute these -- these areas of coverage.

So some progress has been made, but there's still more to do.

High-speed Internet shouldn't be a luxury limited to highly populated areas.

Broadband, as you heard, has become an essential part of everyday life, and we have to do more to ensure businesses, families, and schools in our rural communities have equal access to broadband and all the opportunities that it provides.

So I'm looking forward to today's hearing, to hear more about the impacts, and, more importantly, what steps can be taken to prioritize and expedite broadband deployment into rural areas of New York State.

So I'm going to end my comments here so we can proceed with today's hearing.

And I'm very pleased to see this commission taking the lead here to focus on this very important issue in the rural communities of New York State.

Thank you.

ASSEMBLY MEMBER THIELE: Good morning, everybody.

My name is Fred Thiele. I'm the State

Assemblyman from the 1st Assembly District,

which is in -- on Long Island, and is part of

Suffolk County. It's the eastern-most district.

Montauk is -- you'll see those bumper stickers: Montauk, the end.

Well, that's where my district ends or begins, depending on how you look at it.

But in addition to representing eastern

Suffolk County and eastern Long Island in the

State Assembly, I am also the Chair of the Assembly

Committee on Local Governments.

This is my -- I'm completing my first year as the Chair of Local Governments.

And it is our pleasure, on behalf of the Local Governments Committee, to co-sponsor this hearing today with the Commission on Rural

Resources.

I want to thank our Co-Chairs for taking the initiative with regard to this extremely important issue as we look forward to the 2020 session.

It's important to assess what the efforts, the Governor's program, which began in 2016, which Assemblyman Santabarbara alluded to, and the efforts that have been made so far.

It's important to assess how well that program has worked, but, more importantly, where can we do better in the future to ensure that every citizen in New York State has broadband?

As I said, this is my first year, so I will be listening intently, and want to hear from our witnesses, and whether it be local government or the business sector, community groups; whoever wishes to testify today.

I just wanted to also present a little bit of housekeeping.

I look forward to hearing each of you testify.

But, first, try to limit your comments to no more than 10 minutes.

I know we have a clock here somewhere for 10 minutes. Your written testimony will be included

as part of the public record.

So you should feel free to summarize your testimony, rather than reading it to us word for word.

Please also be sure to state your name for the record prior to speaking.

Those of you who did not have the opportunity to testify and would like to submit written testimony, should submit your testimony via e-mail or mail as soon as you can, but, please, no later than two weeks from today. It will be added to the written hearing record.

And, again, thank you in advance for participating today.

And I turn it back to our chairs.

SENATOR MAY: All right.

Thank you.

So as Chairs, we took the privilege --

ASSEMBLY MEMBER THIELE: Oh, if -- if I -- if I may, Chairman May, I also wanted to introduce the members of the State Assembly who are participating with us today.

And, having been -- being from Long Island, this is one of the few days where I feel outnumbered by upstate instead of being outnumbered by the city

1 of New York.

2 So, welcome to all of you.

But our members here today are: Assembly

Member Woerner, Assembly Member Smullen, Assembly

Member Tague, Assembly Member Ashby, Assembly

Member Buckwald, Assembly Member Brian Miller,

Assembly Member Salka, Assembly Member Dan Stec, and

Assembly Member Jones.

Those are the -- I think the members that are here thus far today.

So I did want to introduce our colleagues.

Thank you.

SENATOR MAY: So let me introduce Senator Jen Metzger.

And I am -- I'm going to try not to have the timer actually make that obnoxious noise, but, we are going to keep to it two minutes, if we can, from -- from here on in.

Thanks.

SENATOR METZGER: Thanks.

So, first of all, I just want to thank

Senator May, Assembly Member Santabarbara, Assembly

Member Thiele, for organizing this very important

hearing.

I represent the 42nd District, which covers

portions of the Catskills, the Mid-Hudson Region, including all of Sullivan County, and parts of Ulster, Orange, and Delaware counties.

I also chair the Agriculture Committee, and I'm a member of the Rural Resources Commission.

I want to just start out by saying that I am very pleased that the State has -- even -- I'm a first-term Senator. Before I came here, prioritized this issue, and has done a lot, to date, to extend broadband service in the state.

But it -- I -- on the other side of that, since I've been in office, it is probably the single greatest complaint I get from my constituents in Sullivan County and parts of Ulster.

It is -- in my mind, broadband is about as much a basic need as electricity is in today's world.

It is absolutely essential for closing the gap -- the rural-urban gap in access to educational resources, to opportunities, to skilled jobs.

It's so important to farming, it's so important to closing the income inequality gap in our state, and ensuring the long-term viability of our rural communities.

I brought -- I just want to -- a map of

Sullivan County. This was provided by Sullivan County Planning.

It's a 2014 map, but they've said this is the most accurate map of cell service.

And the yellow areas, there are -- there's no service at all.

So there's work to be done there.

It only tells part of the story, though,
because most of my complaints -- most of the
complaints I receive are about poor service, and
speeds -- broadband speeds that just make it
impossible for kids to do their homework, for people
to really use it.

And this one comment kinds of sums it up from one of my constituents.

David says: Slow Internet speed, no customer service, and a "take it or leave it" attitude.

So -- so there are real -- there are real issues that -- that we have to address.

And I -- I will wrap it up by saying, I've introduced legislation that aims to close that gap.

I appreciate, and look forward to, learning from all of you about your experiences elsewhere in the state.

Thank you.

SENATOR MAY: Thank you.

Shall we go one at a time?

ASSEMBLY MEMBER THIELE: We have other -- other members of the Assembly who would like to make an opening statement?

ASSEMBLY MEMBER WOERNER: Hi, I'm

Assemblywoman Carrie Woerner. I represent the

113th Assembly District.

And many of the themes that I'm hoping that we can touch on in today's testimony have been introduced by our Chairs, who I'd like to thank for calling this very important hearing today.

But my concerns really sort of get summed up by the dichotomy between the statistics, which show that there is broad-spectrum coverage across all of New York, and the anecdotal evidence that we hear from individuals, that either say they don't have access or their access is not at a -- not at a level that is of sufficient quality to be effective.

And it gets summed up in an -- in a little anecdote.

I happened to be in Salem, New York, this summer, at a farm, that I had been to earlier in the spring. And I had access in the spring to some data on my laptop which I could access. But in the

summer, I didn't have access.

And I said, I thought you guys had broadband here. How come I can't -- how come I can't get on?

And they're, like, Well, it's wireless, and the corn is too high, so the signal can't come through.

## [Laughter.]

ASSEMBLY MEMBER WOERNER: And I think that is -- you know, in a rural community, that kind of sums it up, that, because we're not delivering fiber to the home, we're dependent on wireless. And wireless can get gummed up with a lot of geographic issues that are relevant in rural communities that aren't relevant in urban and suburban communities.

So I'm interested to hear what we're thinking about in terms of understanding latency issues, issues of reliability that have -- that are plaguing those who -- who might have access to broadband through wireless, but, it is not a -- it is not an effective service to meet their needs.

So thank you all very much for coming, and I'm looking forward to hearing all have you to say.

SENATOR MAY: Thank you.

ASSEMBLY MEMBER THIELE: Assembly --

SENATOR MAY: Senator --

1 ASSEMBLY MEMBER THIELE: -- oh, I'm sorry. SENATOR MAY: I thought we'd go one --2 3 ASSEMBLY MEMBER THIELE: Well -- right. SENATOR MAY: -- (parties cross-talking). 4 I wanted to alternate. 5 So, Senator Jordan. 6 7 SENATOR JORDAN: Thank you, Senator May. Thank you to all the Chairmen of this hearing 8 today, it's well needed. 9 High-speed broadband is a necessarity -- a 10 11 necessary in today's world, for education; everyday 12 information for families or individuals; businesses, 13 not only for the benefits of the business, but for 14 customers, as well as towns and their people, for 15 economic development. 16 I'll also add that it's very important so 17 that early voting works properly. Those without high -- high-speed broadband, 18 19 and in a good number of instances, no broadband, are 20 at a severe disadvantage in so many avenues of life. 21 Broadband is still not for all. 22 I hear the complaints of the people in the 43rd Senate District. 23 Broadband is not working for them. 24 25 In looking at Microsoft's report of February

from this year, two of the four counties I represent are sorely lacking.

Columbia County is entirely within the 43rd Senate District that I represent, and is ranked number-three worst, where 49,000, or, 80.7 percent, of the people don't use Internet at broadband speeds.

Washington County, where I represent the towns of Cambridge and Easton, is ranked number-five worst, where 49,000, or, 79 percent, of the people don't use Internet at broadband speeds.

Saratoga County is ranked Number 40, where 123,000, or, 54.4 percent, of the people don't use Internet at broadband speeds.

Rensselaer County is ranked 45, where 81,000, or, 50.4 percent, of the people don't use Internet at broadband speeds.

We have to ask, why?

Why aren't people using Internet at broadband speeds?

The minimum figure that the FCC categorizes as high-speed is download speeds of 25 megabits per second.

Round three of the New York -- the

New New York Broadband Program set a goal of

1 achieving statewide access to Internet downloads speeds of at least 100 megabits per second, and only 2 25 megabits per second in the most rural and remote 3 areas, disadvantaged by plan, as it were. 4 5 Obviously, that has not been achieved. 6 Why? 7 I hope today we'll learn why, so we can fix it and truly have broadband for all. 8 9 SENATOR MAY: Thank you. And I'll just call everyone's attention, 10 11 there's a clock over here. So, if you can keep your 12 comments below two minutes, I would really 13 appreciate it, because there are a lot of us, and we 14 need to get to the witnesses. 15 ASSEMBLY MEMBER THIELE: Assembly Member 16 Smullen. 17 ASSEMBLY MEMBER SMULLEN: Thank you, 18 Chairman. I'm Robert Smullen. I represent the 19 20 118th Assembly District, which is Fulton, 21 Hamilton, upper Herkimer, parts of Oneida and 22 St. Lawrence counties.

It's one of the largest Assembly districts in the western Adirondacks and the Mohawk Valley.

23

24

25

And, I'm new to the Assembly, but I'm not new

to communications in remote places.

This five-year commitment that we've had has left pockets of isolation, including in my district.

This is the number-one technology issue that I hear from our citizens and from our local governments.

Towns like Stratford and Ohio and

Lake Pleasant are being left behind in this

move into the twenty-first century.

Put simply: Our businesses need it to compete. Our children need it to grow and learn.

This is like the post office was in the 1800s. It's like rural electrification was in the 1900s. It's become a modern technological necessity.

Like I said, I'm new to the conversation here, but I think the time for polite conversation is coming past due, and that it's time to accelerate our actions here in New York State for our citizens to be properly connected to the twenty-first century.

Thank you very much.

SENATOR MAY: Thank you.

Senator Ritchie.

SENATOR RITCHIE: Just want to start off by

1 saying thank you, also, to the Chairs. I represent three rural counties: Oswego, 2 3 Jefferson, and St. Lawrence. And though we've made, I think, great 4 improvements, there's still a real need. 5 6 And one of the things that I hear on a daily basis is the concerns with the last mile. 7 8 There's nothing that makes my constituents 9 angrier than when the person who lives at the end of the road has high-speed Internet service, and 10 11 they're less than a mile away and they can't get 12 hooked up. 13 So I thank you for the opportunity. 14 I hope that we have a conversation about how 15 we can invest in the last mile, and make sure that 16 all our constituents have access to good service. 17 Thank you. ASSEMBLY MEMBER THIELE: Thank you. 18 19 SENATOR MAY: Thank you. 20 ASSEMBLY MEMBER THIELE: Assembly Member 21 Tate.

I also want to thank the three Chairs;
Chairman Santabarbara, Chairman Thiele,
Chairman May.

ASSEMBLY MEMBER TATE: Thank you.

22

23

24

25

Thank you very much for bringing us together today on this very important issue.

I probably represent the most rural area in the state of New York.

I have seven -- all or parts of 7 counties,

26 school districts. And I've heard the stories of

kids driving to the nearest library at 8:00, 9:00 at

night to get coverage to be able to do their

homework.

And what's really sad, that we're the Empire State, and that, in 2019, okay, big communities, like Catskill and Saugerties don't have cell phone coverage or broadband.

You can stand right across the street from the Green County county office building and not have cell phone service. And I think it's sad.

And I think that this broadband is very vital to upstate's economy.

I think we look at it more as an investment.

If you invest in the broadband, it will bring people here.

Today most people have home-based businesses.

And if they can't run their home-based business out of their home, they're not going to move there.

So I think we need to concentrate on a real

1 tough plan. I think that, economically, this will be the 2 best thing that ever happened for Upstate New York. 3 I thank you very much for giving me the time 4 this morning, and I look forward to listening to the 5 6 conversation. 7 Thank you. SENATOR MAY: Thank you. 8 Senator Seward. 9 10 SENATOR SEWARD: (Microphone off.) 11 Yep, thank you. 12 I want -- also want to thank our Chairs for 13 organizing today's hearing. 14 Obviously --15 SENATOR MAY: Is your microphone on? 16 SENATOR SEWARD: -- obviously, there is a 17 great deal... Well, we'll try this. 18 19 (Pulls over a different microphone.) 20 Can we restart the clock? 21 [Laughter.] 22 SENATOR SEWARD: I want to also start out by 23 thanking our Co-Chairs for organizing today's 24 hearing. 25 Obviously, there's a great deal of interest

in this very important topic.

You know, I'm very honored to represent the 51st Senate District. It's a swath of all or parts of nine counties right in the center of the state, mostly rural. It's a great place to live, work, raise a family.

The area has a lot to offer, but, and it's a big "but," there are still far too many rural areas that lack high-speed broadband services, and that holds the entire region back.

In these areas, whether you're discussing education, economic development, community development and growth, the conversation inevitably turns to the lack of high-speed broadband availability.

It hurts our businesses.

It hurts individuals and families who are looking to perhaps move to our rural areas, but don't, because of the lack of broadband.

It hurts those who are trying to sell their home, but can't, because they don't have broadband at their location.

And, of course, as has been pointed out, there are countless number of students who just can't do their homework at home because of the lack

of broadband services.

Now, over the years I've advocated for State funding to address this problem.

We've had federal dollars that have come into the state as well.

And the investments that have been made are paying off, no question. There are more people with broadband services today.

And I want to congratulate the Broadband office for the job that they are doing.

And, also, the Public Service Commission, where their agreement with Spectrum, that's helped to some extent as well.

However, there is so much more that needs to be done, much more work that needs to be done, to reach the goal of high-speed broadband for all.

There are wide swaths of Upstate New York
that may have some service, satellite, wireless, but
from what I hear from my constituents, these
services are not reliable and they lack quality of
service.

There are serious issues there.

We in the rural areas should not have to settle for second-rate service.

My constituents contact me every day.

They feel excluded and forgotten, because they do not have high-speed broadband.

We need to change that.

And I'm hoping that today's hearing will start that process, develop a strategy for going forward, so that we can have, truly, universal high-speed broadband for all New Yorkers.

SENATOR MAY: Thank you.

ASSEMBLY MEMBER THIELE: Assembly Member Ashby.

ASSEMBLY MEMBER ASHBY: Thank you to the Chairs for holding this meeting, and thank you for everybody coming together today to have this conversation.

You know, I look forward to hearing the testimony.

And I share much of my district with Senator Jordan, who read off a lot of statistics, and I'm grateful -- grateful that she did that.

But one of -- one of the concerns that

I have, and I'm hopeful to hear about today too, is,
not only in the rural areas that are -- are farther
out, but the rural areas that border on the suburban
areas that -- that are in my district, and even in
the suburban areas themselves, there are numerous

pockets of areas that are not covered. And there's a large disparity between the households there in terms of their ability to communicate within that community, whether it's through education, small business; a variety of issues.

And I look forward to hearing about those as well today.

Thank you.

SENATOR MAY: Thank you.

Senator Tedisco.

SENATOR TEDISCO: Thank you very much, Chairman.

What we're talking about today, is you can see is something very valuable for our state: it's communication, and the ability to communicate.

The promise of statewide broadband has not been fulfilled, and it should be fulfilled.

Imagine representing or living in the 49th Senatorial District, a corner of it, where you not only don't have broadband, but another component where you can communicate, and that is cell phone usage.

In my district, several areas, several constituents, can't get an emergency vehicle or report an emergency, and I say this in tongue in

cheek, unless they know smoke signals or homing pigeons.

And that's not a reliable source to protect your constituents.

This is about commerce, this is about education; this is about the nexus between those two.

And in my district it's about public safety.

If you don't have cell phone, and you don't have broadband, and I know, because, when I go into it, I can get neither one of those, and many of my constituents can't, it's dangerous, not only to the economy of your community, not only to the educational aspects, but to the public safety.

Now, ESDC, it's not only about providing one Internet provider.

ESDC provides grants.

I think some of those ESDC grants should be provided for grants for several of these Internet providers, so there's competition, because, right now, there are some providers, they're terrible providers, and they're singular in many of our areas.

And we get reports every single day: Cell phone usage goes down. Broadband, the ones that

1 have it, goes down. We're in the Adirondacks in many areas: 2 3 Fulton, Hamilton County, Herkimer County, Saratoga County, Schenectady County. 4 We need statewide rural broadband, and we 5 6 need cell phone access also, because it's not only 7 an economic issue, it's a public-safety issue. Thank you. 8 SENATOR MAY: Thank you. 9 ASSEMBLY MEMBER THIELE: Assembly 10 11 Member Miller. 12 ASSEMBLY MEMBER MILLER: Thank you for 13 putting this hearing together. You know, broadband is, you know, one of the 14 15 most important aspects of my district. 16 I go from the Mohawk Valley, all the way to 17 Orange County. 18 So I pass through or next to most of my 19 colleagues here, and there's pockets throughout that 20 region. 21 You know, I'm looking at the map up there. 22 You know, the district's 204 linear-miles long. 23 I pass through seven counties, probably one

of the most rural parts of New York State, other

than the Adirondacks. But cell phone coverage is

24

25

spotty, broadband is non-existent in parts.

And as some of my colleagues have talked about, the broadband coverage, not far from the suburban areas, is really one of the bigger issues we have.

You know, for many years I worked as a sales engineer from home.

If I were to live in, you know, outside Delhi in Delaware County, I couldn't have lived there to pursue my -- my profession.

You know, this is truly an economic driver.

And I'm glad we're putting this all together, and I'm looking forward to hearing some testimony.

Thank you.

SENATOR MAY: Thank you.

And -- oh, Senator Helming.

SENATOR HELMING: Good morning, everyone.

I'd like to thank our hosts for holding this important public hearing today.

And to thank everyone who is here to listen to the hearing on rural broadband and its impacts, or lack thereof, on local communities throughout the state.

As the ranking member on the Legislative

Commission on Rural Resources, and the ranker on the

Committee on Commerce, Economic Development, and
Small Business, and as a senator for the
54th Senate District, which is comprised of many
rural communities, I hear every single day countless
complaints about our state's broadband resources.

These complaints and concerns come from people who are unserved or underserved.

In addition to the testimony that we'll hear today, I have submitted written testimony to the host of this meeting on behalf of many, many, many residents, business owners, libraries, schools, economic development groups, and local elected officials from my district.

Each of their testimonies demonstrates how, without quality access to broadband, our small farms struggle, our businesses struggle, access to online education is limited. That digital divide that we're working so hard to combat continues to grow.

Access to health care is limited.

And in this day and age when telemedicine is becoming an important component of health care, especially in the field of mental health, it's absolutely critical that we provide Internet services.

And, also, my colleague Senator Tedisco

mentioned the importance of having access to cellular services and broadband services to deal with public-safety and emergency-management issues.

I saw that firsthand a year ago in August, when we had significant flooding in southern

Seneca County. And our emergency-management command post struggled because of the lack of broadband services.

I want to thank you again to our hosts, and say, I look forward to hearing today's testimony, so we may work together to expand high-speed Internet at a reasonable cost to our rural communities.

Thank you.

SENATOR MAY: Thank you.

And I guess our last person is Senator Little -- no? Nothing?

Okay, that's -- that's it, then.

So thanks to everybody for your comments.

I want to invite Jeffrey Nordhaus and

Thomas Congdon to -- as our first witnesses.

We'll start with Mr. Nordhaus, please.

JEFFREY NORDHAUS: Good morning.

Good morning, Chairs May, Santabarbara, and

Thiel, members of the Legislature.

Pleased to be here today to update you on

progress that has been made on the New New York
Broadband Program, and, more broadly, the
unprecedented steps that the State has taken to
ensure that all New Yorkers have access to
high-speed, affordable broadband regardless of where
they work or live.

My name is Jeff Nordhaus. I serve as executive vice president for innovation and broadband at Empire State Development.

I oversee the New New York Broadband Program and the Broadband Office which administers it.

The \$500 million New New York Broadband

Program was created, with legislative support, in

2015, and provides grant funding to broadband

providers to deploy service in unserved and

underserved areas of the state.

The program's goal is to ensure that all New Yorkers have access to high-speed Internet.

Much of the focus of the program is in Upstate

New York.

When the program was launched in 2015, approximately 30 percent of New Yorkers lacked access to high-speed broadband.

The gap was most acute upstate where 65 percent of New Yorkers lacked access.

However, Governor Cuomo recognized that, in today's economy, as has been noted today, high-speed broadband is not a luxury, it is a necessity.

It's an integral part of life for students, families, and small businesses.

From economic development, to education, to health care, access to broadband is a vital tool.

For these reasons, the Governor launched the New New York Broadband Program to close this digital divide.

The New New York Broadband Program,

coupled with commitments secured from

Charter Communications, has allowed New York State

to address 2.4 million unserved and underserved

locations in less than five years.

We're extremely proud of this accomplishment, and I look forward to sharing the details of that with you here today.

The New York Broadband Program is, by far, the largest and most successful state program of its type in the nation.

The program supports projects, providing speeds of 100 megabits per second, with 25 acceptable in the most rural areas of the state where fiber connections were found to be

prohibitively expensive.

In total, the program has catalyzed more than a billion dollars in public and private investment across New York.

The economics of broadband often require State investment to incentivize rural providers.

For a company to build a mile of fiber, economically, for example, it needs enough potential customers, enough density, along that mile to recoup its investment profitably.

Rural areas generally lack that density, which is why the government needs to step in and help providers get service to New Yorkers who need and deserve it.

To accomplish that, the program supports public-private partnerships by offering State funding to incentivize providers to build out to unserved and underserved locations lacking access to broadband.

The BPO selected (indiscernible) providers using an innovative and groundbreaking reverse-auction process, that ensured the highest broadband speed would be available for the lowest state cost for each unserved and underserved location.

In addition, we conducted these auctions regionally, which ensured that funding would be distributed across the entire state rather than just to the areas with lower costs.

As was discussed earlier, the program has taken place across three phases.

In 2016, Phase 1 resulted in 75.8 million in new broadband investment, including 54 million of State investment to 25 projects, addressing more than 36,000 locations.

In 2017, Phase 2 resulted in \$256 million in new broadband investment, including 202 million of State investment to 51 projects, addressing more than 85,000 locations.

In 2018, Phase 3 resulted in \$389 million in new broadband investment, including 230 million of State investment to support 50 projects, and address 134,000 locations.

The public can find State and private-funding numbers, an interactive map, build-out status, and a municipal search tool on the BPO's website, nysbroadband.ny.gov.

The BPO and our broadband partners also engage with communities and constituents across the state, including providing updates on status of

ongoing projects across New York.

During the program's implementation, another development took place that is important to highlight.

The FCC withdrew funding from its

Connect America fund that was earmarked for a number of states across the nation, including New York.

The withdrawal was a direct result of Verizon's decision to decline its CAF allocation which supported the provision of broadband to consumers in rural areas.

Governor Cuomo and the BPO knew that the declined funding had the potential to enhance the program and make a difference in the lives of thousands of New Yorkers.

So rather than allow the funding to be diverted to states outside of New York, we undertook a yearlong effort, in coordination with the New York congressional delegation, that resulted in the State securing up to \$170 million of incremental additional funding, on top of the \$500 million, from the FCC for Phase 3 of the Broadband Program.

This funding greatly expanded the BPO's ability to attract broadband providers into Phase 3, including, notably, Verizon Communications.

Verizon will expand FIOS service to over 18,000 unserved locations across five upstate regions in an agreement the company reached with the PSC -- which Tom will speak about further -- at the same time, will result in a total of 50,000 new FIOS connections upstate -- mostly in Upstate New York.

And those are still currently under construction.

In total, the New New York Broadband Program will cover approximately 256,000 locations across the state, representing a total of 721.9 million in private, State, and federal investments, excluding the value of the homes that are being upgraded by Charter.

When all state-secured upgrades and build-out commitments, pursuant to the broadband initiative, are included, as mentioned earlier, more than 2.4 million homes are being addressed.

The vast majority of BPO projects are fiber to the home networks, which are capable of download speeds of 100 megabits, and, in fact, are generally gigabit-capable.

These build-outs, which are occurring statewide, from the North Country, to the Mid-Hudson, to the Southern Tier, are deploying 21,000 miles of fiber, enough to nearly

circumnavigate the globe.

This is a game-changer for Upstate New York, for businesses looking to grow or settle, for New York tourism, or for residents in hamlets across our state who are looking to stay connected.

After full implementation of the commitments announced in connection with the program, approximately 99.9 percent of all New York households will have access to high-speed broadband, with 99 percent at download speeds of 100, and the remainder at speeds of 25 megabits.

In terms of network construction, where we stand today, 98 percent of houses have access to these speeds, and the remainder of projects still in the process of construction.

The BPO used grant funding to provide enhanced satellite service for the last 1 percent of the state where the cost of building fiber infrastructure was found to be prohibitively high or where no other bids were received at all.

The program utilized this low-cost solution, which meant key speed and cost requirements, in order to ensure that no New Yorkers were left behind.

The program stipulates 25 megabits as the

minimum tier for qualifying service. And the new Hughes' satellite launched during our program meets that requirement.

Previous generations of satellite provided speeds of 15 megabits, or even less.

In addition, our -- the satellite service we have supported has no hard data caps, so usage is never cut off during the month.

Approximately 79,000 locations will receive satellite from Hughes Network Solutions.

The BPO program also requires affordability.

All providers have to offer 25 megabits for no more than \$60 per month.

Installation fees cannot exceed \$49 on a one-time basis, and additional fees and connection charges cannot be applied.

State investment has also reduced the cost of satellite dishes which are often priced at over \$400, and service can be over \$100 a month.

In areas served by satellite, we still expect that more homes will convert to fiber as providers continue to build out to new locations over time, even in those satellite areas.

From a network-construction standpoint,

Phase 1 and Phase 2 projects are generally complete,

and all remaining projects are currently in active construction.

The Broadband office has hired a technical validation firm to review all completed projects.

BPO funding is disbursed on a reimbursement basis, which means providers will only receive reimbursement when projects are complete and validated.

As part of our effort, the BPO works closely with the PSC.

As you know, as a condition to the merger with Time Warner Cable, the PSC required

Charter Communications to offer faster broadband speeds to all passed homes and businesses in its footprint, and to provide service to an additional 145,000 unpassed locations.

Charter's recent settlement agreement with the PSC also allocated \$12 million as a reserve fund for any unexpected gaps left in coverage.

My colleague Tom Congdon will address the Charter agreement further.

In conclusion:

I cannot emphasize enough how transformative the New York Broadband Program has been for New York, especially for Upstate New York.

1 We're proud of the program's efficient 2 implementation. It's been held up as a model by other states, and even recently by the federal 3 4 government. I want to thank the Governor and the 5 6 Legislature for their foresight in identifying 7 broadband as a key priority for New York, and for their support during the program's implementation. 8 9 We should be proud of the work we've done and 10 the accomplishments we've made in providing this 11 critical service to so many New Yorkers.

Thank you very much, and I'm happy to answer your questions.

SENATOR MAY: Thank you.

That was exactly 10 minutes. That was impressive.

[Laughter.]

SENATOR MAY: I think we'll -- we'll direct questions to you before we go on to Mr. Congdon.

It that --

12

13

14

15

16

17

18

19

20

21

22

23

24

25

JEFFREY NORDHAUS: Might -- if you want to hear about Charter and how they fit together?

It's up to you, though, obviously.

SENATOR MAY: Okay. Why don't we go ahead, then. And when we (indiscernible), then we can

direct questions to either one.

THOMAS CONGDON: Thank you.

Good morning, Chairs May, Santabarbara, and Thiele, and other distinguished members.

My name is Tom Congdon. I'm the executive deputy at the Department of Public Service.

Availability and access to broadband is crucial to driving economic growth and opportunity.

And we welcome this committee's focus on rural New York communities that may be unserved or underserved by this essential service.

While states do not directly regulate broadband, New York's Public Service Commission and the staff at the department of public service are helping expand access to broadband services.

Under state law requiring cable and telephone mergers to produce a public net benefit, along with other regulatory initiatives, the commission has required substantial private investment in broadband infrastructure throughout New York.

Commission-ordered network expansions by

Charter Spectrum, Altice, FairPoint, and Verizon are

well underway. And the department's oversight of

these projects will continue until they are

complete, which is helping achieve Governor Cuomo's

vision for universally-available broadband.

The department works closely with ESD's

Broadband Office to maximize coordination of the

projects we oversee with the projects underway with

BPO funding.

Today I'll briefly summarize the department's activities that are contributing to a nation-leading and unprecedented build-out throughout the state, starting with Charter.

Charter is the largest cable provider in the state.

It provides digital cable television,
broadband Internet, and VOIP telephone service to
more than 2 million subscribers in New York State in
more than 1,150 communities.

They have a potential customer base of 5 million households in its franchise areas.

On January 8, 2016, the commission approved Charter's acquisition of Time Warner Cable, subject to several regulatory conditions to advance the public interest.

The most notable conditions for today's discussion are a requirement to increase broadband speeds to 300 megabits per second by the end of 2019, and a requirement to build out its network to

pass an additional 145,000 unserved or underserved homes and businesses in the state's less-densely populated areas.

In early 2017, the commission determined that Charter would miss its first milestone to pass 36,250 premises by May 18, 2017, and we commenced enforcement proceedings.

A settlement was approved by the commission in September 2017, that established a new enforceable build-out schedule, with interim milestones, and required Charter to pay a million dollars for missing the first milestone, and up to \$3 million for each of the remaining four milestones going forward.

But in early 2018, Charter and department staff disagreed on the eligibility of certain addresses claimed by Charter, including

New York City addresses and addresses awarded by the BPO, which led to the commission issuing several additional enforcement orders, culminating in a July 2018 order, revoking the commission's approval of the merger.

After months of intense negotiations, on April 19, 2019, Charter and staff reached a new settlement, which the commission approved in July.

This summer settlement includes the following compliance obligations:

Charter is required to complete the build-out of 145,000 passings entirely in Upstate New York, and remove all New York City addresses it had previously claimed for compliance purposes.

Charter is restricted to only a small number of addresses that overlap with BPO-awarded areas.

Charter is required to pay \$12 million for further broadband build-out or build-out by other companies, in addition to the 145,000.

Charter must comply with a new build-out schedule that includes enforceable milestones every four months, with a final project completion by September 21, 2021.

The penalty for missing any milestone is \$2,800 per passing. And any funds collected through this mechanism will also be used for additional broadband build-out.

The department estimates Charter will invest between 600 million and 700 million dollars to complete the build-out, pursuant to the 2019 settlement, which is more than double the public benefit value estimated by the commission in its 2016 merger approval.

As of the time of the settlement, Charter had passed approximately 65,000 of the required 145,000 addresses across the state. And they are required to pass more than 76,000 homes and businesses by the end of this month.

Under the settlement, Charter must maintain the communications plan and web portal established in an earlier settlement agreement, which provides local governments and individual consumers with information to determine whether or not they are included in Charter's build-out plans.

Consumers can see if their address is included in the Charter's expansion plan by going to www.bldlkup.com (build-up (sic) look up).

Altice and FairPoint are the next two companies I'll talk about.

In June 2016, the commission's -- I'm sorry, the Public Service Commission approved Altice's acquisition of Cablevision, and, in June 2017, Consolidated Communications acquisition of FairPoint. And both orders required system build-out and service improvements.

Cablevision had nearly 2 million customers and served Long Island, New York City, and the Lower Hudson Valley.

FairPoint and its subsidiaries had nearly
23,000 customers, and served Chautauqua, Columbia,
Dutchess, and Rensselaer counties.

The commission required Altice to provide cable facilities, without extension fees, to all unserved or underserved residential and non-residential premises in the town of Mylan, Dutchess County, and to make good-faith bids into the BPO program, to provide broadband service to the Barrier Island communities of Oak Beach and Gilgo Beach.

For the remainder of Cablevision's New York service areas, the commission requires Altice to establish a fund to absorb customer-line extension fees that otherwise would be assessed for the construction of cable facilities.

Altice has completed its broadband expansion in the town of Mylan, which was approximately 730 locations, and to both Barrier Island communities.

With regard to line extensions, Altice has extended its network to approximately
45,166 households and small businesses, at an estimated total cost of about \$27 million since the close of their transaction.

For Consolidated, in addition to requiring them to fulfill prior commitments with the BPO, the commission required a minimum investment of \$4 million in network reliability and service-quality improvements, including expansion of its DSL Internet access service, to a minimum of 300 additional locations, with an emphasis on the Taconic service territory.

This approval provided enhanced service for customers in Chautauqua, Columbia, Dutchess, and Rensselaer.

And Consolidated completed the BPO commitments in March of this year, to bring broadband service to approximately 10,300 locations in the upstate, Mid-Hudson, and western parts of the state.

With respect to Verizon, in a July 12, 2018, order, the commission approved a joint proposal, which is sort of like a settlement, that was reached between Verizon, the Department of Public Service, the Communications Workers of America, and the Public Utility Law Project of New York.

This agreement addressed service-quality problems experienced by the company and its customers.

The settlement requires Verizon to make fiber-based broadband service available to certain additional households in the areas covered by any BPO grants it receives, beyond those households required under the term of the BPO grants.

This commitment will result in approximately 20,500 additional houses being served by its fiber-based broadband network.

The settlement also required Verizon to make fiber-based services available to 10,000 -- 12,000 homes and businesses, approximately 4,000 of which would be in the mid-state and upstate regions, within one year of the agreement.

Verizon has made fiber-based services available to about 11,569 residents and business customers as of July 2019, with 3,600 of those located in the upstate region.

I'm going to briefly turn to wireless, and a couple other areas of the commission's activities.

The commission has also taken actions to facilitate private investment in next-generation wireless infrastructure that will further expand broadband coverage.

Wireless carriers are on the cusp of deploying their next generation of wireless networks

known as 5G, which will provide high-speed broadband over wireless networks.

Wireless carriers design, build, own, monitor, and maintain small-cell and distributed-antenna system networks in New York.

These networks are constructed and used by FCC-licensed wireless carriers to serve the public in many areas of the state, and the deployment of the infrastructure is typically co-located on pre-existing infrastructure, like, utility poles, lamp posts, and buildings.

One of the barriers to 5G deployment is regulatory and cost uncertainty regarding how the carriers access this pre-existing infrastructure.

In March, the commission acted to eliminate one of those barriers by making it easier and less costly for telecom companies to attach wireless devices to existing utility poles.

As a result, wireless companies will be able to improve broadband capabilities and roll out the new generation of cellular mobile communications that will provide greater data-service functions, higher system capacities, and better device connectivity.

Gaining access to utility poles is essential

to 5G deployment, as well as to improving coverage and capacity for existing 4G networks.

And the commission's action in March provides certainty of a clear regulatory framework, which the industry believes will result in substantial private investment.

SENATOR MAY: Three minutes.

THOMAS CONGDON: Lastly, I'll just wrap up with the role we play with respect to franchise agreements.

We do set minimum standards for cable franchises to go to certain densities.

The franchise agreements themselves then can go beyond the minimum standards, and the commission reviews and approves those.

Many of the BPO grantees are also providing cable television, which come before us for franchise approvals. And we've added approximately 25 of those due to the BPO programs.

In closing:

Look, broadband is crucial to driving growth, improving our education system, connecting

New Yorkers to the twenty-first-century economy, and it remains an essential component for creating and sustaining economic opportunity in rural areas

throughout the state.

2 Thank you.

We'd be happy to answer any questions.

SENATOR MAY: Great. Thank you.

Thank you both for your testimony.

It's a little complicated because I think
many of us have questions for each of you. So we'll
(parties cross-talking) --

JEFFREY NORDHAUS: We'll both stay.

SENATOR MAY: But I'm going to start talking to Mr. Nordhaus, and this is a general question that I think a lot of us may have at this table.

So, I agree with you, the State has been doing a lot.

But if our rhetorics is, that we are having all this success, and what we're actually hearing from our constituents is that they are deeply frustrated, or completely uncovered by service, how do you account for the disparity between the hard work that you're doing and the experience that customers are actually having?

JEFFREY NORDHAUS: Sure.

Well, I think one thing we can all say, and, you know, by all the opening comments, is that broadband is essential.

And I think when we launched the program, the Lieutenant Governor came, and I remember her saying "broadband is like oxygen."

You just, you know, kind of assume it's there. And when it's not there, it's a very big deal.

And I think that's the way we all feel at this point about broadband.

And so I think, to the extent there are people who don't have broadband, you know, they -- they contact our office, and they contact you. And we want to work with them to address that.

We are still in the process of rolling out the projects.

So if you look at, you know, the 1 percent that has satellite, and, certainly, people would probably rather have fiber, we do often hear from those constituents.

And then we have an additional 2 percent of the state which is still in the process of either being addressed by Charter or being addressed by the BPO.

So that's, you know, a couple hundred thousand folks who don't have, you know, broadband "oxygen," as it were, and we would expect to hear

from them.

We are very focused on making sure that all New Yorkers have access to broadband, and continue to diligently pursue that.

SENATOR MAY: Thanks.

So let me follow up there about the satellite.

So Hughes got one of the larger grants in the Phase 3 process, and it was aimed at the majority of locations that you were planning to cover in Phase 3.

But that's going to be satellited service.

It's -- I did the math. It's like four hundred dollars per location, as opposed to four to ten thousand dollars per location for a lot of the other grants that you were giving out.

So how are you going to monitor, actually, the quality of the service?

Because we hear a lot about -- about HughesNet being inadequate --

JEFFREY NORDHAUS: Right.

SENATOR MAY: -- providing inadequate service.

JEFFREY NORDHAUS: Well, we also hear a lot of that. And we are very focused on, you know, that

consideration, and working closely with folks to make sure they're satisfied with the service.

As you point out, it was large by number.

But, by dollar volume, it was a relatively small grant, and it allowed us to cover the last 1 percent, where, as I mentioned before, we generally didn't get bids or we got uneconomic bids.

So our choice was, basically, to (indiscernible) satellite, or they would be left behind.

And so we thought that, for, you know, the 400, let's say, of the total cost, the State portion being 200 or less in some cases, we had two different structures, that that was a very economic way to make sure that those folks, you know, do have some access to the online experience.

The other thing about satellite is, it's only, again, on a reimbursement basis. So to the extent that customers sign up and take the service, we would then reimburse on a one-for-one basis.

We have found that, because of the structure of census blocks -- this was referenced in one of the opening comments as well about mapping -- because of the structure of census blocks, we have actually service in many areas that were awarded to

satellite, with fiber that's adjacent. And we found dozens, if not hundreds, of cases where the fiber is actually going to serve across the street.

So that's a very exciting kind of upside of -- of the -- of the satellite award.

One other thing I just want to say on the mapping is that, in our program, we require a full census block to be served.

So we have been speaking publicly about the problems with the federal maps for, I think, three to four years.

And we agree, we are not satisfied with those maps. So we've taken steps to make our own state map more accurate.

And one of the things that we did in our program is, it's an essential core condition that, if there's a census block with a number of homes, they all need be served; not, one served, all served.

SENATOR MAY: Oh, great. That was -- that was one of my next questions.

I wanted to ask about the technical-validation firm you mentioned.

JEFFREY NORDHAUS: Sure.

SENATOR MAY: Can you say a little bit more

about how they're going to report their findings?

For one thing, will we know what their findings are when they come -- when they make their report?

JEFFREY NORDHAUS: Sure, sure.

So --

SENATOR MAY: And can you just say more about that?

JEFFREY NORDHAUS: -- right.

So it was a great question.

So we've retained a group called Tilson, which worked with us for the past four years.

They're a leading communications firm. They helped structure our auction. And they have many, many engineers on staff.

And so we're actually doing a two-step process to validate all our projects.

First, "we," meaning the BPO staff, we work with Tilson to do a desktop audit, where all the providers have to submit maps and shapefiles, showing, you know, these are the homes, these are the routes, and then showing where all the fiber was laid along the street, and then the huts and all the equipment.

So we first validate that on a desktop basis,

obviously, for cost reasons, because, if we found they missed 12 houses, then the provider -- and we have found cases where 12 houses were missed -- you got to go back and build out.

So we save the physical trip, based on that map, to preserve, you know, costs, obviously.

Then once the desktop audit checks out, they actually go and drive the route.

So we sent them out and they validate.

We also do some speed tests.

So we are, you know, working with them to prepare those reports.

And we'll be happy to, you know, kind of follow up with you on any appropriate further inquiries you'd have on that.

SENATOR MAY: Yeah, so we hear a lot about people who, supposedly, have service, but it gets interrupted 100 times a day, or something like that.

Will they be able to measure that? Or -
JEFFREY NORDHAUS: Yes, I did see from

Madison County, I think maybe that e-mail as well.

I believe that, you know -- and I'm sure, you know, you've heard that more than once, perhaps.

In -- in -- we are quite sure that that is not in an BPO-awarded area. We have not heard, you

know, complaints about, you know -- we are (indiscernible) our providers in those areas, and others, as I mentioned earlier, are providing fiber optics, which is, you know, basically, the gold standard in terms of fiber.

It's scalable. You know, it's fiber, so, speed of light, and it can be scaled through multiplexing. You can continue, over time, to add more equipment to make more and more data go through that.

So we expect that to be a really superior service for all.

And if we ever hear any complaints about broadband projects, they have to be fixed.

And we've, you know -- you know, we haven't had many. But if we have any, we immediately make them fix.

Now, there also are complaints, as, you know, was referenced, service quality and others, outside of BPO grants.

So in the case of an individual may have dropped service, may complain about a provider, a lot of those are in non-BPO areas, which need to be addressed through, you know, those channels.

SENATOR MAY: Okay. And I guess my -- really

my last question is to both of you.

From what you said, and from I hear all the time, broadband is coming more to be understood as a utility than just a -- some kind of privilege or service.

What -- how would it change your -- what you do if the Legislature were to pass legislation, declaring broadband to be a utility, and to be -- and need to be regulated the way phone service or television service is regulated?

THOMAS CONGDON: So I think that the FCC at the federal level actually went down that road when it was dealing with net neutrality during the Obama Administration. And then, you know, recently, under the new FCC, that was reversed.

So it's a determination sort of made at the federal level. It's an interstate information product that has been deemed to -- you know, federal jurisdiction.

SENATOR MAY: Can you bring your microphone a little closer.

THOMAS CONGDON: Sorry.

Is it better?

SENATOR MAY: Yes.

THOMAS CONGDON: Sorry.

And so any state law that would seek to regulate broadband, I think would have to be carefully reviewed, to make sure it doesn't get tripped up with any of the federal preemption issues.

SENATOR MAY: But would you -- how would it change what you do if we were (parties cross-talking) --

THOMAS CONGDON: Well, I mean, I think it really depends on what you put out in terms of the requirements. And, you know, like any state law, you know, as an agency, we're ready to implement whatever it is the Legislature throws at us.

And so, you know, we'd be happy to review any of those kinds of proposals.

SENATOR MAY: I believe Senator Hoylman has a bill that is similar to what's been done in California.

So that would be, I think, what we would likely to be looking at.

Thank you.

JEFFREY NORDHAUS: Thank you.

ASSEMBLYMAN SANTABARBARA: Thank you to both of you for your testimony. Thank you for being here today.

I just want to circle back to the estimates.

I know there were a lot of estimates in both of the testimony you provided. They're high numbers.

And I think, as Senator May talked about the maps, and the -- how those relate to what's actually out there, all of us, I think you're going to hear, that have constituents, locations, that just don't have service, or, we just went through this with the Upstate Cellular Task Force coverage areas, where the maps show coverage.

You go out there, and it's either not what has been stated, the quality of the coverage, or the coverage is non-existent.

And we see the same thing kind of happening here.

As I mentioned in my opening statement, FCC data shows New York State is 100 percent covered at this point. But we all know that that's not true because of what we hear in each of our districts.

So that being said, last month the FCC issued a new order. They required broadband providers to produce new maps, showing data, using shapefiles rather than on a census block. And it's going to provide better detail, to identify these underserved

areas.

So my question -- my first question is, and maybe you can explain what the State is doing in anticipation of these maps:

Is the State -- how are you coming up with the estimates; how are we coming up with these numbers, and who is served and who is not?

JEFFREY NORDHAUS: Right.

Well, first of all, good to see you, and thank you for the question.

The mapping has been, I don't know, a thorn in our side, but it's been a challenge for us for many years, we've complained about the federal maps.

So we, basically, decided that they were not good enough for the New York State purposes; that we had to get down to a level of granularity that exceeded what they were doing.

And, in particular, we were dissatisfied with, one served, all served. And that just doesn't, kind of, work.

So what we did with our program is, took many, many steps within the constraints of, you know, what information was available to us.

One thing we did, as mentioned a moment ago, was, for our program, we require full census blocks

be served, with -- I can't think of any exception to that.

So, if you -- so when we talk about a census block that was awarded to a provider in a BPO program, if it's got 50 homes in that census block, all those 50 homes are going to be served.

So we have, obviously, a high degree of, sort of, certainty around anything in the BPO build-out area. So that part of the map is very well understood by us.

Another thing that we were able to do as a result of, really, Tom and the PSC's hard work, is we were able to -- the Charter process, to execute a non-disclosure agreement to get house-by-house data on the Charter build-out area.

So we had, for their footprint, basically, what we call the "green dots" and the "red dots."

The green dots were areas that were unserved, that they were going to build to for the build-out, and the red dots were the areas that they were not.

And we have created, in our Phase 3, and due to the scope and scale of Charter in the state, that, obviously, covers a huge amount of area.

So we took the areas that were unserved by Charter and we've auctioned those off in our -- in

our program as well.

So if you take sort of the good visibility -excellent, I would say, visibilty on all BPO areas,
and then you take, sort of, the Charter mapping that
we've done --

Which the federal government doesn't have the benefit of that, because providers aren't actually required to turn over maps to the federal government.

-- but if you take all those and you build up the steps we've taken, you have a much better picture -- we have a much better picture of the state than would be available through the federal maps.

The other thing that we did, though, just in case that wasn't, sort of, enough, and we were worried about unserved areas, is we put into our auction any area that is a census block, which is, one served, all served.

So even if the census block was served, we said, if you can come to us and show us that a federal map is inaccurate, and you want to bid for a part of that, meaning the unserved part of an otherwise served block, that was an acceptable part of our program.

And we did have a couple of cases like that, not a lot.

So I think through -- and by the way, the last point I'll say is, the folks that did the map for the FCC are actually the same folks who did our mapping. So we have really good insight into, you know, the technique.

So mapping is a huge issue, you're absolutely right to point it out.

And we've tried to take steps to really close the gap between what's publicly available and what, you know, we can actually see and know on the ground.

ASSEMBLYMAN SANTABARBARA: And this is still ongoing, the maps are not completely updated at this point?

THOMAS CONGDON: Our maps are updated -ASSEMBLYMAN SANTABARBARA: They all updated?

JEFFREY NORDHAUS: -- yes.

ASSEMBLYMAN SANTABARBARA: And they're available?

JEFFREY NORDHAUS: Yes. We have a map on our website. And also the Charter look-up tool that Tom mentioned is also on our website.

ASSEMBLYMAN SANTABARBARA: So when it comes

to the rural communities that we're talking about, you know, what's -- it's -- what's -- how -- how -- how are these projects being prioritized to get service expedited in these rural areas, or the areas that we're talking about today, that just don't have service or don't have quality service?

JEFFREY NORDHAUS: Well, we're -- you know, we're holding the utilities to an extremely tight time frame. And, you know, failure is not something, you know, that's an option.

Any failure will be -- you know, we have contracts with them, and we're going to enforce those contracts.

So all our Phase 1 and Phase 2 projects are done.

The Phase 3 projects, which were pushed back a couple months in order to get the alignment with the FCC, and get the 170 million, those are well underway, and will be wrapped up tomorrow -- I'm sorry, next year.

And from the PSC's standpoint, Tom and the PSC are closely monitoring -- he can speak to it, too -- the Charter rollout.

So, you know, getting these projects out there expeditiously is the top of what we try to do

every single day.

ASSEMBLYMAN SANTABARBARA: And I guess, yeah, I'll transition to you, because it's kind of -- you guys both had testimony.

With regards to the Charter merger that was revoked, now there's been settlements.

You talked about new agreements, things that they're responsible for doing.

So what steps -- you know, in the past, we've seen that they haven't delivered on what they said they were going to deliver. We're still seeing rural areas that were just not served or skipped over, or whatever the case may be.

What's being done now with the new agreements, new settlements, to make sure they're in compliance, and make sure they're doing what they said they're going to be doing?

THOMAS CONGDON: Right.

So, first, one of the -- one of the benefits of the settlement is that, it eliminates a lot of ambiguity that the company had tried to suggest existed. And that's why there was different interpretation of what an "eligible passing" was, and what wasn't.

And, you know, with due respect, when we've

talked about bringing broadband to the less-densely populated areas of the state, the commission did not mean New York City. But that was one of the biggest disagreements on eligibility.

The settlement now completely eliminates that kind of ambiguity, and so there's very clear eligibility guidelines as to what is supposed to happen in the build.

The other thing that is also very clear is the enforcement milestones.

And any miss of even a single passing towards the milestone is now subject to a \$2,800-per-passing penalty that has to be paid automatically into escrow.

So they're out that money at the time of the milestone, and so that's a much bigger stick than had existed prior, before the settlement.

We require monthly reports on status.

We know where they're actively building, so we can send staff out into the field, and witness and observe the build in construction.

The milestones, as I mentioned, that are enforceable by the \$2800-per-missed penalty are every four months. So that's a more frequent milestone than existed prior.

And, the overall build-out schedule I think is -- is achievable, and so we are expecting them to stay on it.

The other thing I'll mention, and this applies also to the BPO grantees, we're as impatient as the customers without service.

And -- and so where the BPO grantees and Charter need to -- need some assistance in -- in coordinating project work with the utility-pole owners, we've really engaged in that process.

It's a very intense logistical challenge to get to the hundreds of thousands of utility poles, and to hang equipment on those poles in a manner that is safe and protective of the electric reliability and the other systems that are utilizing those poles.

So there is a PSC-approved process for how utilities approve access to their poles.

The BPO grantees and Charter relies on that process to be able to get timely approvals to safely hang their network.

And we at the PSC are facilitating that logistical -- that logistical work, to ensure that there are no barriers when it comes to the interrelationship between the providers and the

utility-pole owners.

ASSEMBLYMAN SANTABARBARA: So I guess -I just want to (indiscernible) -- so with the
maps -- the updated map now, new information that we
have, the data, with the funding that we have, the
new agreements, are you confident that -- that
there -- all areas will at least have the ability to
be covered by broadband, or are there areas that
still are in question?

JEFFREY NORDHAUS: Well, we have -- yes, we're confident.

All areas are covered with the following, sort of, clarifications:

One is that, you know, we're talking about coverage according to the terms of the program, which is 100 everywhere, or 25 in the most rural area, including the satellite for that 1 percent which we spoke about.

And then the other piece of it is that, you know, Charter has a build-out plan, which is fairly large.

And one of the issues that we've had, is that Charter has the ability to change where their they're building.

So, you know, they told us, you know, we're

building this area, and we auctioned off, sort of, the balance. And then there were changes made.

So when we are counting on them to do a certain job, and they change the job, it sort of creates a challenge.

So, the PSC, we've worked together on this, sort of, complex issue for many months, if not years. And, you know, Tom can talk more about it.

But there are now, sort of, very strict limits on what the -- Charter can do in terms of the changes.

But, to the extent there are changes in their plan, we have to -- we have to keep -- we have to see this through to the very end to make sure that Charter completes the job, on time, according to the plan. And if they leave any gaps, we have to make sure they're addressed.

So with that caveat, yes, we're -- you know, we're confident.

ASSEMBLYMAN SANTABARBARA: And is there a timeline?

JEFFREY NORDHAUS: Yes, absolutely.

ASSEMBLYMAN SANTABARBARA: Okay, so what is that timeline?

JEFFREY NORDHAUS: Well, for the BPO, like

I said, everything next year. And then, for Charter, 2021.

ASSEMBLYMAN SANTABARBARA: Okay. Thank you.

SENATOR MAY: Thank you.

So we have questions from Senator Metzger,
Senator Seward. Oh, Senator Ritchie. And
Senator Helming.

Is that it?

Oh, and Senator Little.

Okay. So we'll start with Senator Metzger, and I guess we'll go the same way, alternating.

SENATOR METZGER: Thank you, Senator May.

So, I've got questions for each of you.

First of all, I want to thank you for, you know, all the work you have done to date.

And I want -- I had mentioned earlier that
I represent Delaware -- many Delaware communities.
That's an incredibly rural district, and it's going to be entirely built out with fiber, which is pretty amazing, working with a rural electricity cooperative and local telephone companies.

But, in other parts of the district, and you talked about, you know, sort of confirming -- confirming who is going to get -- verifying who is going to have broadband, and, you know, where

they're falling short.

My concern is, I think it's very difficult to monitor or confirm the quality of the service.

It's not whether you have it or not.

It's, are you getting poor service?

And I want to hear from you what you are going to do.

We get a lot of complaints about HughesNet, and the fact that they're not -- the customers are not getting their promised speeds.

So how can you verify that -- that -- that they're getting the quality of service that they should be getting?

That's -- I'll start with that one question.

JEFFREY NORDHAUS: Sure.

Well, like I mentioned earlier, you know, we have a contract with these providers, and they have to perform on the contract.

So to the extent, you know, that they're not performing, then they will be in violation of the contract with the State, and we will take, you know, appropriate actions under that.

In general I will say, I believe we enjoy very good relations with all the partners who are working with us.

If, you know, someone in the BPO office calls and says, you know, We have a problem with this location, or this town, where service doesn't seem to be working -- we haven't had that situation -- but, whenever we call, they're extremely responsive.

We're also deploying state-of-the-art networks.

And so I think, in general, with regard to the fiber, one of the big benefits of fiber, in addition to the speed, is, fiber is far more cost-effective to run, it requires lower cost of maintenance over time.

Copper is, you know, subject to -- it can be -- you know, fray, it expands in, you know, summer, and can, you know, winter, and, you know, it can be cut. More -- you know, it's more fragile, essentially.

Whereas, the fiber optics is going to be a benefit going forward.

So I expect, across the board, to see upticks in customer satisfaction in any areas being served by fiber.

And, certainly, if there are complaints about a BPO service, you know, let us know.

Outside of BPO service, that's another issue,

1 obviously, not under the Broadband Program. But, the attorney general, I believe, is 2 going to be speaking. And they've done some 3 investigations, and can speak about service quality, 4 advertising, and those points. 5 On satellite, I think one of the confusion 6 7 points that has come up, is that there are multiple generations of the satellite. 8 The prior two generations of the satellite 9 were significantly slower. 10 11 It's only the new Generation 5 that offers 12

25 megabits.

I personally -- before we awarded it, I personally speed-tested it.

13

14

15

16

17

18

19

20

21

22

23

24

25

I went down to their headquarters, like, two years ago, when they first launched it.

I speed-tested it over the summer.

So, I mean, I have been able to achieve those speed levels.

I'm not saying that, you know, that person was on the wrong generation, but, we do have a very direct dialogue with Hughes.

If there's any customer that's not getting what they were promised, call me, please.

> SENATOR METZGER: Okay.

THOMAS CONGDON: May I just add, briefly, that the department also has specialized equipment, and we speed-test to validate the speed upgrades that were committed to in the merger-approval order.

SENATOR METZGER: Okay, great.

And two more questions related to the -- actually, the Charter agreement.

So -- so Charter failed to meet its responsibility to extend coverage to these 145,000 residents.

It's a long time, two years can be, for these residents to -- if that's part of the agreement, you know, before they're going to get service.

Is that set in stone, is there any way to speed that up, given the fact that they were already supposed to have that service?

THOMAS CONGDON: So I think there's just physical limitations. We're trying to go as fast as we possibly can.

There was litigation, and a dispute in that litigation, that lasted for close to a year.

And so, with that resolved, I think we're now on track.

And for us, it was critically important to get the build where it was intended, to actually

hold the company accountable, so that they knew that we were serious about achieving the build-out where we intended it.

So the settlement, I think, achieves the policy goals, and it establishes much more stringent penalties for future non-compliance.

And as I said earlier, I think one of the critical things is, that it removed any ambiguities as to where the build-out needs to occur.

JEFFREY NORDHAUS: And, by the way, if I could add one thing, I mean, that is the end date for the last home.

So they're (indiscernible) -- I think every six months, there is a (indiscernible) --

THOMAS CONGDON: Every four months.

JEFFREY NORDHAUS: -- every four months there's a --

THOMAS CONGDON: Every four months.

So they're, you know, making progress towards the milestones.

We'll see their very first milestone, under the new settlement agreement, is this month.

It's supposed to hit 76,000 and change, and so we'll look very closely at that for compliance purposes.

SENATOR METZGER: Okay.

Now, I've had constituents say that they've been quoted a price from Charter for \$9,000, \$10,000, to get broadband service to their home.

I'm trying to imagine, if, you know, your -- our electricity provider, you know, wanted to charge that much to get electricity to the home.

So what's going on with -- with those -- in those instances?

THOMAS CONGDON: So that is -- you're referencing what is called in the regulatory world, the "line-extension fee."

And so, to the extent that there is someone near the Charter network, but not within the required network of a franchise, or, if they're not in, you know, the build-out plan, pursuant to the regulatory requirements of the commission's merger approval, those customers, if they want Charter service, or another provider service that's nearby, will contact that company, and the company will give them a quote as to how much it would cost to run the network to their premises.

As a service, you know, under our jurisdiction, it's cable and telephone; it's not broadband. And so it is distinct from a regulatory

standpoint.

You compared it to electricity.

There's not a universal service requirement by law or reg.

There are standards on density that they have to meet, for sure.

There are regulatory requirements, pursuant to our merger approval, and through franchise agreements, that we will absolutely enforce.

But where there's a premises that exists outside of that, they quote these kinds of line-extension fees. And that represents, you know, a customer that would be outside of their area.

JEFFREY NORDHAUS: Yeah, just to add a little bit, I mean, the way the franchises work with a lot of towns, because cable is not regulated, in the way that Tom was explaining, they have a franchise which says they're required to build out in the areas that are of a certain density, like we talked about earlier with the profitability.

So those tend to be, 30, 35 homes per mile. There's different metrics.

And then when there's someone outside of that, they often have to give them a quote.

So I say, okay, I'm not in the density, but

I want service. How much would it cost?

Those homes are not considered served by Charter in our program.

We don't consider, if you could call Charter and get quoted \$12,000, we don't say, oh, great, you're served.

You're not served if you have to pay \$12,000.

So those would be considered outside of the Charter footprint, from our standpoint. And we would be under our own, sort of, self-imposed obligation to make sure the BPO had a better option than that.

And maybe that person didn't like their current provider, or maybe the service is still being constructed, whatever it is, we should look into that. But that's not something that we would consider a normal, sort of, acceptable solution for coverage.

SENATOR METZGER: Okay.

Okay. Thank you.

ASSEMBLY MEMBER THIELE: Thank you.

So today we heard some percentages.

Today, how many New Yorkers do not have broadband service, as you're defining it?

JEFFREY NORDHAUS: So we look at how many

New Yorkers have access to broadband; in other 1 words, if you want it, you could call up and get it. 2 3 And those are the statistics, as opposed to who, physically, the number of customer 4 5 subscriptions. So, today, 98 percent of the state is the 6 7 number --ASSEMBLY MEMBER THIELE: I guess my --8 JEFFREY NORDHAUS: -- that has access. 9 ASSEMBLY MEMBER THIELE: -- okay. 10 11 So, 2 percent, what does that 2 percent 12 translate into as far as numbers (parties 13 cross-talking) --14 JEFFREY NORDHAUS: Well, we, roughly, think 15 of the state having 8.1 million households. 16 So, rough numbers, every point is around 17 80,000. So, around a hundred sixty, you know, plus or minus. 18 19 We'd have to get the exact number for you, 20 but (parties cross-talking) --21 ASSEMBLY MEMBER THIELE: And that's today? 22 JEFFREY NORDHAUS: Today. 23 ASSEMBLY MEMBER THIELE: Okay. 24 There's a lot of talk about quality of 25 service.

Is -- is there a measure, is there a standard, that you use to measure quality?

You know, I can tell you, on Long Island, you know, there -- there -- when it comes to -- as we heard this morning, there are areas that are dead zones for cell phone service or for Wi-Fi.

Out on the east end of Long Island, when the population doubles and triples, your quality of service of Wi-Fi and cell phone service is not very good.

How do you define what is -- what is "good quality"?

I mean --

JEFFREY NORDHAUS: Sure.

ASSEMBLY MEMBER THIELE: -- it's one thing to say, you have access to broadband, or you have access to service.

But, how do you measure quality?

Are we -- what is the standard that we're using?

JEFFREY NORDHAUS: So, you know, first of all, I think you know this, but, you know, a lot of people do call our service office and say, you know, hey, this is great that we have a big broadband program, but my cell phone stills doesn't work.

And we explain, you know, cell phone coverage is a different mandate.

In fact, we're working on that mandate now.

So, you know, we do want to make sure that folks know that that's also a top priority of the State, is better cell phone coverage.

But that would be outside of the BPO. And -- ASSEMBLY MEMBER MILLER: I understand.

JEFFREY NORDHAUS: -- I think (indiscernible)
(pointing to Thomas Congdon.)

THOMAS CONGDON: I'll speak to areas that are the PSC's jurisdiction, like, landline, telephone, and cable.

We do measure quality -- service quality through a number of measures.

Complaint rates, both to the company and to our office, is one measure.

Through our merger approvals, we do require, in a number of instances, on the cable-infrastructure improvements, to provide broadband speeds. And we're out in the field, and actually validating and testing those speeds, to ensure the quality is what was envisioned with that regulatory requirement.

As Jeff mentioned, with respect to cell phone

coverage, that is a very -- that's a very topical subject that we're now investigating on this cellular coverage task force.

JEFFREY NORDHAUS: And that, you know, the universal, sort of, metric that people do use for broadband is really speed. I mean, that is the key metric that is used in the industry.

It's, you know, megabits per second, download speed.

Also, upload speed is increasingly becoming important for people who want to do a communication from their home. Let's say you want to do a video conference that requires a symmetrical service.

And, of course, you would look at outage time.

But, in general, it's, speed, is the key metric. And that's the one that our program is based on and the FCC is based on.

ASSEMBLY MEMBER THIELE: Okay.

You talked about, you know, fiber kind of being the gold standard. And we've talked about satellite, and difficult.

What -- what percentage of New Yorkers get their service through fiber, or satellite, or cable?

What are the --

JEFFREY NORDHAUS: Well, in general, you know, we -- we don't have subscription information into how people are actually paying for service right now.

But in terms of the, sort of, metrics of our program, we have 99 percent that can achieve 100 megabits or better, which could be through fiber; it could be through cable, like Charter. And then the last 1 percent is satellite. Of course satellite is available in other areas too.

So, in general, we're, approximately,

99 percent at the 100 megabit, or better, which is,
generally, fiber or cable.

ASSEMBLY MEMBER THIELE: Yeah, I haven't heard anybody say "100 percent" yet today.

I've heard 98, 99, 99-plus.

What would it -- nobody has said, we're going to get to 100 percent.

What would it take to get to 100 percent?

I think, you know, the people we represent,

you know, at some point there's an expectation that

everybody should have this service.

How do we get to 100 percent, and what is it that we should be doing to get there?

THOMAS CONGDON: Well, one -- I think one of

the challenges with the build-outs that are underway is that our state is dynamic.

There's new development that pops up.

There's, you know, some premises that close, or -or, you know, get out in the field, and what looked
like it was a home on a map, doesn't actually exist
when you get out in the field to serve it.

And so there's a dynamic aspect to this that will always be there and we will have to react to.

As the build-outs get completed, and it becomes clearer to all of us where there may be pockets that are left, under the settlement with Charter, there is a \$12 million fund that is meant to be used as sort of a cleanup, to get at any pockets that may exist when the build-outs are complete.

And so that would be one resource that can be tapped, and all of us will need to look and see how that does.

And to the extent that there are other pockets that can't be reached through that mechanism, then we can consider other mechanisms.

ASSEMBLY MEMBER THIELE: What's your timeline on that?

THOMAS CONGDON: The build-out under Charter

is scheduled to go through September of 2021. 1 And so that's the -- the current build 2 3 schedule, with the enforceable milestones along the 4 way. ASSEMBLY MEMBER THIELE: Thank you. 5 SENATOR MAY: Thanks, Senator Seward needs to 6 7 leave at 1:00, so I'm going to let him go next. SENATOR SEWARD: (Microphone off.) 8 9 Thank you, Senator May. First of all, I want to thank both of you 10 11 gentlemen for being here today, and... 12 SENATOR MAY: I think your my microphone 13 still isn't on. Make sure there's a light. 14 SENATOR SEWARD: (Microphone on.) 15 Is this better? 16 SENATOR MAY: Yes. 17 SENATOR SEWARD: There we go. First of all, I want to thank both of you, 18 19 Mr. Congdon and Mr. Nordhaus, for being here, 20 and also for your willingness to work with us to reach our mutual goal in terms of providing a 21 broadband service to all New Yorkers. 22 23 But having said that, I wanted to go back to 24 something I thought I heard you say, Mr. Nordhaus,

in your testimony, that there is still fiber that's

25

being built into areas that are currently served by satellite.

And isn't that an -- a recognition that, you know, fiber is better service than the satellite?

And if so, I mean, shouldn't our goal be fiber to every home in New York?

Shouldn't that be our goal, to address the, you know, reliability and quality of service issues that we're all hearing from these other forms of providing service, such as satellite?

JEFFREY NORDHAUS: Right.

Well, thank you, Senator Seward, and good to see you.

Yeah, I think that fiber is, pretty much, widely viewed as the gold standard.

Certainly, objectively speaking, offers much higher speeds than satellite is capable of. And, also, lower latency, which is an issue with satellite being 22,000 miles away.

So I think, from a technical standpoint, fiber, and in that, I would also include cable, because a lot of cable is actually built with fiber in the backbone as well, is a, you know, tremendous product for broadband.

The issue, frankly, is just cost. It really

just comes down to money.

I mean, if you could have, you know, gold-plated service everywhere, you'd probably say, I want fiber and cable to every single home.

And it's, literally, just a question of cost, and trying to earn some kind of return on that.

But from a service standpoint, I think what you said is -- is right on the mark.

SENATOR SEWARD: A couple more quick questions.

The -- to the issue of the complaints that we're hearing on the speed, reliability, quality of service, from, you know, the satellite providers, you mentioned that complaints within areas that are -- that are part of the BPO projects should be directed to you.

But outside those BPO areas, where should we be sending our complaints and concerns that we hear about the service?

Because -- and I think I speak for everyone on this panel -- we hear complaints.

And I'm just trying to get it straight in my head here, the difference between what we're hearing from constituents and what we're hearing from you today, in terms of how it has improved a great deal.

But where -- where do we send complaints in 1 terms of (parties cross-talking) --2 THOMAS CONGDON: Well, I would say it depends 3 on the nature of the complaint. 4 And to the extent it relates to what you know 5 6 to be a requirement of Charter, we want to hear it. To the extent it relates to video services 7 that we regulate, we want to hear it. 8 9 To the extent it relates to telephone service, which is often provided over broadband 10 11 infrastructure, we want to hear it, and we can do 12 something about it. 13 14 on the nature of the complaint, by all means, send 15 it to us. 16

So, you know, I think my answer is, depending

We have a complaint hotline. We have a very dedicated consumer-complaint staff that handles a lot incoming every day. And they often get good results for customers that are experiencing hardships.

SENATOR SEWARD: Okay, thank you.

We will -- you'll be hearing from us.

[Laughter.]

17

18

19

20

21

22

23

24

25

SENATOR SEWARD: One final question for Mr. Nordhaus.

We've gone through the three phases.

JEFFREY NORDHAUS: Yes.

SENATOR SEWARD: And 1 and 2 are completed, and 3, over the next year, will be completed.

The \$500 million that was directed toward this effort a few years ago, 2015, as I recall, has been used up or fully committed.

In order to meet the needs of New Yorkers, should we be looking at a Phase 4, or maybe a Phase 5, which, admittedly, would require some additional State dollars directed toward this effort?

But, it just strikes me that our work is not done, and may not be done, once Phase 3 is -- build-out is completed, and -- and the Charter and other build-outs are completed. There's still going to be some areas unserved or served in kind of a second-class way.

And so do we need a Phase 4 and 5, if the Governor and the Legislature could agree on additional some monies to be directed toward this effort?

JEFFREY NORDHAUS: Well, you know, there still will be -- I mean, it depends, ultimately, on the goal.

If the goal is to have, you know, what was the goal of this program, 100 megabits, and 25 in the most, basically, prohibitively expensive areas, and maximize the use of the \$500 million through an auction, I mean, that's, I think, we feel that we were able to accomplish that.

And we did -- we took that money, through getting the federal money and the auction, and just stretched it, partnering with the PSC to have Charter cover 150,000 homes.

Through all these different measures, we did everything we could to make that funding stretch as, you know, far as it possibly could.

We still have 1 percent that's through wireless.

Some of your constituents, and, collectively, have said that they want something better.

And so, to the extent, it's, you know, your discretion and the Governor's direction to do that, of course, we stand by to implement.

So it's, ultimately, a policy and funding decision.

But -- but there is a number of homes that are with the satellite, and, you know, that is something that, obviously, you brought to our

attention.

So if that was the decision, we would be happy to help.

SENATOR SEWARD: So if -- if the Legislature and the Governor could agree on some additional funds here, you could put them to good use?

JEFFREY NORDHAUS: I think so. I mean, I think so.

I mean, I think that, you know, you always want to think what's the right sort of policy, and sort of the cost per home, that kind makes sense.

And we were seeing, in the last stages of our auction, that the cost per home was getting very, very high.

And, you know, we did a lot of analysis into other state and federal programs as, how much capital does it make sense to subsidize to bring broadband service to a home?

And so, through our auction, you know, it started in Round 1, as you might expect, now, 2,000, or there were some cases that were below that. Then we saw it tick-up.

And then in Round 3, we were seeing -- we -- we funded some projects at seven to eight thousand per home.

But we were seeing some proposals come in substantially north of that. We saw some over 10,000. We, I believe, even saw some over 20,000.

So there comes a point where you say, what's the most effective use of capital?

I think in the remaining, kind of, 1 percent, there's probably some in the portion of that that you could still do quite cost-effectively. We'd have to do analysis around that.

And then there might be some that you'd say, you know, this person lives 20 miles off the grid, and as much as we want them to have broadband, it would cost, you know, pick a number, 500,000 to a million.

Is there a point that you say, we want everyone, but that home is just too uneconomic based its location?

So I think that, in general, we could put that money to use.

We also want to balance that against sort of making sure, you know, it's still an economic use, and that we are using alternative technologies to cost-effectively get to some folks, whether satellite or another wireless technology, including wireless or other options are out there.

1	SENATOR SEWARD: Thank you.
2	SENATOR MAY: Thank you.
3	ASSEMBLY MEMBER THIELE: Assembly
4	Member Woerner.
5	ASSEMBLY MEMBER WOERNER: Thank you very
6	much.
7	Thank you both for your testimony. It was
8	very informative.
9	I I I want to make sure that I've got
L 0	the facts right here.
L1	So, the when the broadband project office
L 2	finishes with it with Round 3, there will be
L 3	256 new locations, which is a which equates to
L 4	2.4 million homes, that will now have broadband
L 5	coverage at the 100-megabitbits level.
L 6	Is that the do I have that right?
L 7	JEFFREY NORDHAUS: A little and I'd like
L 8	to, sort of, take that in a couple of pieces.
L 9	So, 256,000 is the amount that is done by the
20	Broadband Program.
21	ASSEMBLY MEMBER WOERNER: Okay?
22	JEFFREY NORDHAUS: So that's the number of
23	locations served by the Broadband Program.
24	ASSEMBLY MEMBER WOERNER: And how many homes
25	does that equate to?

1 JEFFREY NORDHAUS: That's, essentially, homes. 256,000 locations, essentially, homes. 2 ASSEMBLY MEMBER WOERNER: Homes. Okay. 3 JEFFREY NORDHAUS: Right. So there will be, 4 5 obviously, multiple people in the homes. And, 6 often, businesses will be in addition to that. 7 So we'll be -- we don't count businesses, but they're usually picked up along the way. 8 9 ASSEMBLY MEMBER WOERNER: Got it. JEFFREY NORDHAUS: Because those aren't in 10 11 the census block. 12 And then, in addition, you have the 145,000 13 Charter locations on top of that. 14 ASSEMBLY MEMBER WOERNER: Right. So somewhere in your testimony you said that 15 16 there was -- you used the number "2.4 million" --17 JEFFREY NORDHAUS: Yeah. ASSEMBLY MEMBER WOERNER: -- homes. 18 JEFFREY NORDHAUS: Yeah. 19 20 ASSEMBLY MEMBER WOERNER: And I -- and I --21 and it appeared to be used interchangeably with the 22 "locations" number, which is why I don't... So what is the "2.4 million" homes? 23 JEFFREY NORDHAUS: 2.4 million is the -- sort 24 25 of the grand total that I referenced, that includes

1 the 256 in our program, the 145,000 locations, and, also, the speed upgrades of its existing network, 2 3 which was agreed as a merger condition. So when we started it was 50 megabits. And 4 5 by 2018, 100. And now, this year, 300 megabits. 6 So we included that condition, which was 7 negotiated by the State --ASSEMBLY MEMBER WOERNER: Got it. 8 JEFFREY NORDHAUS: -- in that number. 9 ASSEMBLY MEMBER WOERNER: So that includes --10 11 but that includes the underserved? 12 JEFFREY NORDHAUS: That includes the 13 underserved, exactly --14 ASSEMBLY MEMBER WOERNER: Got it. 15 JEFFREY NORDHAUS: -- yes. 16 ASSEMBLY MEMBER WOERNER: Okay. 17 So the 256 location -- 256,000 locations, at 18 one point in your testimony you said, "The vast majority of these will be fiber to the home." 19 20 What does a "vast majority" equate to? 21 JEFFREY NORDHAUS: The -- well, what I was 22 referring to is, the vast majority of the grants, 23 meaning, the dollars, because the cost per home for 24 satellite. 25 So I -- you know, the vast majority of the

1 dollars expended through our program are to serve fiber to the home (parties cross-talking) --2 ASSEMBLY MEMBER WOERNER: Got it. 3 4 JEFFREY NORDHAUS: I'll have to get that 5 exact percentage for you. ASSEMBLY MEMBER WOERNER: So what percentage 6 7 of the 256,000, then, are actually fiber to the 8 home? 9 JEFFREY NORDHAUS: Well, it would be around 180,000, because 79,000 are satellite. So... 10 11 ASSEMBLY MEMBER WOERNER: Okay. 12 So I'm going to try and say this in a way 13 that doesn't sound snarky. 14 JEFFREY NORDHAUS: Okay. 15 ASSEMBLY MEMBER WOERNER: But, I've traveled all over some rural communities that I represent. 16 17 I've been in some in the Adirondacks that I don't 18 represent. 19 And I see telephone poles all throughout 20 that, and they all have -- they all have wires 21 running on them. So I know that at some -- that -- that, 22 23 except for the ones that are choosing to be off the 24 grid, they all have access to electric utility and

25

landline phones.

And somebody -- and the density hasn't gotten any greater in many of these areas than when they -- when those lines were originally run.

So somebody at some point thought, I'm going to have to run these lines, even though, on paper, I can't make it work from a profitability standpoint.

So given that, I find myself asking: Why is it that we can't figure out how to get fiber on those telephone poles, to locations that are served by electricity and landline phones, without having to consider whether it is as profitable to do it in those areas as it is to do -- to run those lines in, say, Wilton, New York, where we got lots of people living?

So I just am -- I'm really scratching my head at this notion that -- because the issue, for many people, is that satellite's not good enough.

The latency problem means that it doesn't work for business.

The latency problem means that they can't use -- we can't do telemedicine over a satellite network.

And -- and that's -- you know, those are -- it's sort of a fundamental flaw in the strategy.

So, again, I'm just, like, why is it that we have to make a profit consideration here?

Why is it that we can't just regulate this the way they must have for electric and landline phones, to say, you know, gosh, you want to work in our state, you got to -- you got to serve these communities? The poles are there, run the lines.

JEFFREY NORDHAUS: Well, I don't think it's snarky.

I think it, actually, is a great point.

And it's something that we, through this program, have sort of -- you have to fund -- ask those kind of fundamental questions. Right?

When you see something that's an essential utility, and absolutely necessary, like broadband, which our office has been living and breathing for four years, you know, we ask the same question.

Right?

And, you know, the -- I'll start, and I'll turn it over to Tom, because I think the answer's really, fundamentally, a regulatory one.

But if you go back to telephony, you know, when I was growing up, we were growing up, and, you know, there was something called the "universal service fund." Right?

And it was not economic to put phone -- those same phone lines you saw would not have been there but for the universal service fund, which was, people in the cities are paying into the fund, which is disbursed to the rural areas to support the deployment of fiber -- I'm sorry, to support the deployment of phones in the rural areas.

And what happened is, broadband just grew up in a different way, and it's come up under a different regulatory regime.

And that's really the answer, is that, a lot of it actually grew out of the cable business, which was granted on a franchise base, just like cable TV.

Right? It was on a franchise basis from towns, and grew out.

And I think what's happened is, over time, it's become more of a utility, which is what you're talking about.

ASSEMBLY MEMBER WOERNER: So then I go back -- and I'll let you get in -- jump in, and, Tom, in a second.

Then I go back to the question, and I can't remember whether it was Senator May or Senator Metzger asked you, which is: Wouldn't we be better off regulating broadband as a utility, in

order to ensure that the coverage is, in fact, universal?

THOMAS CONGDON: So it is a -- it's a core policy question that is being asked all across the country.

And the broadband issues, generally, it's been viewed to date as something that has innovated because it wasn't regulated.

And you've got people on both sides of that policy question.

With respect to how the constituents in your area got electricity service, I mean, those investments were made by utility, with a regulated rate of return, and the rates set by the commission.

We simply don't regulate the rates that are charged, even for cable, but certainly not for broadband.

And, so, if there was a regulated rate of return, that would be a different calculation that a company would make with respect to where it's deploying its -- where its deploying its networks.

ASSEMBLY MEMBER WOERNER: Thank you.

SENATOR MAY: Great, thanks.

Senator Ritchie had a question.

SENATOR RITCHIE: Just along the lines,

I guess I -- we'll give you constituent issues so
I can make my point a little easier.

I think, you know, the progress being made has been very helpful, and a lot of people are really happy with the service.

But sometimes it's actually making the situation a little worse for some of my other constituents, when their neighbor has, now, high-speed, and they can see their house, and it's not been extended.

And I -- you know, an example of that is:

We have a constituent, and the census blocks to the north and south of the property had been bid on by the companies, and those constituents are very happy.

However, this customer, or, this constituent, is only a tenth of a mile away from both of those blocks, and wasn't able to get service.

I understand, you know, if it's 20 miles away, that person probably would want the service. But I understand the cost for 20 miles away.

But when it's less than a tenth of a mile, how can we possibly tell these people that they're -- they shouldn't be entitled to, you know, fiber; that they have to sign up for the satellite

service, that, along with all my other colleagues,

I hear quite a few complaints about?

So is there a plan to address that, if it's somebody who is less than a mile, or a tenth of a mile, away, who is kind of left in those pockets?

JEFFREY NORDHAUS: Right.

Well, thank you, Senator for the question, and I understand that situation from what you've described.

You know, at the end of the day, I would say two things:

One is, you know, coming back to, first, principles, in terms of the census blocks, like, we did feel, based on the conversation we had very -- earlier in this meeting, that it was very important to maintain the integrity of the census blocks.

That once you open the door to somebody just serving, okay, there's these four on the edge,

I just want to serve them, but, I'm going to leave the other ones out, you know, Assembly

Member Santabarbara had pointed out the problem of having census blocks that are only partly served, and what that can do to our maps.

So we -- we really wanted to, sort of, keep that principle, that you have to serve everyone.

And so that was the first thing, and that's why it was very important that we do that.

With respect to folks who are just over the edge in another census block, we've had extremely good luck, working with our carriers, to sort of say to them, hey, it would be really helpful if you would sort of go over there.

So if you wanted to -- you know, we do receive those types of letters, and we do want to support those folks on a case-by-case basis.

There's no obligation for them to serve, but we say, look, you know, we spell it out, and we try to assist in any way we can on any individual case.

So if you want to follow up with me, and we'll see if that, you know, tenth of a mile, you know, is possible.

But, in general, the principle of it is that, you know, there might be a tenth of a mile, it might be 10 miles. It's, you know -- and then if you go into that block, there's also people who are probably behind them.

So, got to stick with getting them to serve everybody. And -- and -- and, over time, I think that person will get served.

But we're happy to work with you, to try to

have it addressed in the meantime.

SENATOR RITCHIE: When -- we forward quite a few constituents' names to the Broadband Office.

Can you just tell me what happens from that point?

Does somebody reach out and specifically try to address that issue, or, just, do they just go on a list?

JEFFREY NORDHAUS: No, I mean, we have staff who goes through e-mails, and we try to respond to every single inquiry.

So if you want to reach out to me directly, or to that e-mail, we will absolutely follow up.

SENATOR RITCHIE: Well, and it would just be helpful, when we're sending names over, if whoever is doing the follow-up on your end, if they could just shoot us back an e-mail, just because it would be good to know where they ended up; whether the company was willing to go forward and connect service, or, it's a constituent we need to continue to follow for the next phase.

JEFFREY NORDHAUS: Okay.

Okay, we would be happy to.

SENATOR RITCHIE: And then my last question

25 is:

I've gotten a few complaints that there has been a hold up on the fiber optics, the right-of-way, because of the new easement/DOT easement. And some are saying it's -- the delays are as long as 30 days because of it.

So I'm just wondering if either one of you have heard anything about delays with regards to the new DOT --

THOMAS CONGDON: I --

SENATOR RITCHIE: -- easements?

THOMAS CONGDON: -- I'm not sure which specific you're -- issue you're -- you're referring to. But we have heard some DOT issues can come up from time to time.

As we mentioned earlier, you know, we're dealing with hundreds of thousands of utility poles, and thousands of miles of projects, and so things like that do come up.

And when it's another state agency, either the BPO or the department reaches out to them, to help figure out what the problem is, and what can be done to help accelerate a solution.

SENATOR RITCHIE: Okay. Thank you.

ASSEMBLY MEMBER THIELE: Assembly

Member Smullen.

ASSEMBLY MEMBER SMULLEN: Thank you.

My question, Mr. Nordhaus, you mentioned a couple of times the 1 percenters here.

In this case, 1 percent isn't necessarily a good thing. It's either unserved or highly underserved, is how I would describe many of the people in my district.

Because, according to a presentation that was given at the Adirondack Park Agency last year,
Round 3 awards in the program said that the program's mission will be accomplished for 100 percent of the New Yorkers in the Adirondack Park region.

The citizens I represent know what that means.

It means that they have satellite that's spotty at best, and doesn't work most of the time, or, they're in these pockets of isolation where they have, the lines run through the area; some people have it, and some people don't.

And that's what "100 percent coverage" means to those -- those citizens today.

Now, you've given us some reason for hope here.

And I'm hoping to ask you:

What -- today you've talked a little bit about 25-megabyte-per-second satellite coverage that's coming, that's anticipatory.

But five years from now, what is "100 percent coverage" going to mean for the Broadband Program

Office from a process standpoint?

That's what people want to know, is, what -- what we are doing, or, do we need to change public policy and legislate a different scheme here?

So if you could please let us know, what is five years from now going to look like for 100 percent coverage for the people in the Adirondack region?

JEFFREY NORDHAUS: Right.

Well, thank you for your question, and I understand what you've outlined.

First of all, I just wanted to sort of state that, you know, the goals of our program were set forth by the Legislature and Governor Cuomo when the funding was approved in 2015, which is the \$500 million program. And the goals were to achieve 100-megabit coverage, with 25 in the most, basically, remote areas, where the cost to achieve a 100-megabit connection was prohibitively expensive.

So it was clear that, you know, when we

issued awards, and, obviously, Adirondack Park received a substantial investment of capital, both for fiber, and then, of course, you know, for filling in the gaps, as you talked about, the 100 percent, meaning every location known to us was covered, according to the principles of the program, and not -- you know, I was not stating it was 100 percent at 100 megabits, it was 100 percent coverage.

So I just wanted to clarify that.

And -- and, you know, we have gone through that today.

I think everyone at this point is sort of on the same page, in terms of, you know, the -- what the program's goals were, and how it sort of set about trying to achieve those possible.

The second thing is, just to clarify, that satellite, the 25 megabit, that has been launched. So that is now available for constituents today, and they can access 25 megabits through that service.

You know, in terms of five years out, I think we expect to see, you know, certainly, on the fiber side, because of the scalability of fiber, that those networks will continue to grow and proliferate, and the speeds will be even faster.

But if you had any, sort of, specific other questions, I'll be happy to answer them.

ASSEMBLY MEMBER SMULLEN: Are there any sort of jump-the-curb technology things that we can look forward to, to be able to -- you know, to let our citizens know that -- that higher speeds are coming?

JEFFREY NORDHAUS: That's a great question, and, actually, that's one we received many times during the formation of this project, because, back in 2015, when we did town hall meetings and went around the state to gather information before the program rules were established, we did a request for information. And we tried to get constituent feedback on, what were their concerns, and try to identify issues up front before the program was launched.

And one of the questions that -- this is a little bit memory lane -- but, one of the questions came up was, that -- essentially, you know, my background is, you know, kind of investment -- how do we know this is a good investment?

We want to make sure this \$500 million is being invested well.

One of the things we don't want to find out is that, 10 years from now, we've invested in a

technology that's no longer viable.

And the good thing is that, we feel very good about that, because we know we've invested in fiber optics, and there's nothing better.

As I say, all roads lead back to fiber, even cellular. If you want to expand, we want to expand, cellular networks.

Talk about, how do we do that in the Adirondacks?

Well, we put up towers, and those towers have to link into fiber.

So we've laid the infrastructure of the future.

Fiber optics, basically, carries data at the speed of light. It is not possible to be leap-frogged. Nothing can go faster.

So I think we feel really great about, you know, the infrastructure we've put in place. And we want to continue to move to -- toward a fiber-based infrastructure.

ASSEMBLY MEMBER SMULLEN: Thank you for your testimony, and for your work.

JEFFREY NORDHAUS: Thank you very much.

SENATOR MAY: All right, thanks.

Senator Tedisco.

```
1
               SENATOR TEDISCO: Just one question.
               We get a lot of complaints, as you've heard.
 2
 3
               One of my constituents in my Senate District,
        I mean, there are several, and this is just an
 4
 5
        example of it, none have gone this far, but, has had
        a customer-service ticket out for four months.
6
7
               Is that possible?
               Why would that ever happen?
 8
9
               How could that ever happen?
               Four months.
10
11
               They'll be there. They never show up.
12
               They'll be there. They never show up.
13
               They'll be there. They never show up.
14
               THOMAS CONGDON: This is a -- this is a
15
        broadband outage, or a cable, or all three?
16
               Cable? Telephone?
17
               SENATOR TEDISCO: Broadband.
               THOMAS CONGDON: Broadband.
18
               You know, I -- I think that doesn't sound
19
20
        like a very good business model for that provider.
21
               If it's a provider --
22
               SENATOR TEDISCO: You think?
23
               THOMAS CONGDON: If it's a provider that is,
        you know, receiving BPO funding --
24
25
               SENATOR TEDISCO: It's Frontier.
```

1 THOMAS CONGDON: Frontier? SENATOR TEDISCO: Yeah. 2 3 THOMAS CONGDON: -- then --SENATOR TEDISCO: We get a lot of complaints 4 about Frontier. 5 6 THOMAS CONGDON: Yep. 7 So, you know, that's unacceptable. SENATOR TEDISCO: It is. 8 9 THOMAS CONGDON: I think that everyone would 10 agree. 11 The question is: What can be done, if it's a 12 pure broadband play versus something that's a 13 regulated service? 14 But, we'd be happy to look into it further. 15 If you want to have that constituent reach 16 out to the PSC, we'd be happy to look into the 17 specifics of the complaint. SENATOR TEDISCO: Because it -- because it 18 kind of seems they don't have the manpower or the 19 20 numbers, because many of these individuals are in 21 isolated areas. So it seems like they're waiting 22 for (indiscernible) -- let's wait for 23 5 to 10 complaints from those same closer 24 proximities, then we'll send some people out there. 25 But, that's unacceptable if we're going to

1 have statewide service. THOMAS CONGDON: I think, we agree, it's 2 3 unacceptable. And we'd be happy to look into the complaint 4 in more detail. 5 SENATOR TEDISCO: Okay. 6 7 SENATOR MAY: Oh, sorry. Senator Helm -- or, we're done on this side? 8 9 Okay. 10 ASSEMBLYMAN SANTABARBARA: I just have a follow-up question. 11 12 SENATOR MAY: Well, when we're done. 13 Yes, to Senator Helming. 14 SENATOR HELMING: (Microphone off.) 15 Thank you. 16 (Microphone on.) 17 Thank you. Thank you, gentlemen, both, for your 18 19 testimony. 20 It's interesting, when I was driving to 21 today's hearing, I was flicking through radio 22 stations, and I landed on NPR because the subject was broadband. 23 24 And what stuck in my head was that, at the

base of the Grand Canyon, you can get reliable

25

Internet service.

And I think to myself, well, how the heck do we not have reliable service in the Finger Lakes?

We're not that rural. We're between Syracuse and Rochester.

Why do we have so many people who are unserved?

You shed some light today, and I appreciate that.

But what I'm wondering about too, is, are -is ESD, is it PSC, whoever it is, are they working
with -- are you working with town and community
leaders to establish where the priorities are, where
the precedent should be?

And one of the reasons why I bring up that question is, I provided written testimony from a number of the counties -- the six counties that I represent today.

And, in Wayne County, I found it interesting, including their testimony, is the fact that, of the 41,000-plus housing units in the county, almost 7,000 are unserved. That's 17 percent of their population -- or, 17 percent of the county's housing units.

And that's significantly higher than the

New York State Broadband office estimate of a total of 772 unserved or underserved areas.

So I -- again, I'm wondering, are you working with local leaders, whether it's at the county level, the town level, to figure out where the priorities are?

JEFFREY NORDHAUS: Thank you for your question.

And that's interesting about the Grand Canyon, and so a good anecdote to keep in mind, I think.

With respect to the county data, we would have to look at that.

I'm not sure -- I mean, there are, as we've discussed, a lot of problems with, you know, the maps that are out there on the federal level. They do tend to overstate things and kind of, you know -- so we -- we -- we don't really, you know, spend much time looking at the federal data, because ours is -- is -- you know, has a lot more granularity.

And, basically, our goal has been to get broadband to all; 100 megabits wherever possible, and then the remainder at 25.

So, we coordinate closely with all leaders, including county leaders who reach out to us. We

are always available for those types of meetings or calls.

And we would be happy to follow up with you.

But our overarching goal, and the principle we follow, is we need to get broadband to everyone.

So we don't really, sort of, prioritize one area over the other.

We say, everyone needs broadband because it's an absolute necessity.

SENATOR HELMING: Working with your office,

I've been told that, within my district, almost

8,000 locations without prior access will be served.

I just want to clarify, there are a number of questions about:

Does a location equal a household, or is it something else? Is it a regional?

Can you clarify just really quickly for me?

JEFFREY NORDHAUS: I would have to look at

the "8,000" number, but I believe it would be

households, because what we do is, we cover -- we

look at the data contained in the census block. And
then you're actually required to build out to every

location inside that census block.

So, sometimes, the census block -- the census data may say, given census block has 20 homes in

1 there, and then we award it to somebody. Turns out there's 24 homes in there. 2 They're still required to build out to 3 24 homes, not just 20. 4 SENATOR HELMING: All right. 5 And, real quickly: 6 So I -- we talked a lot about the state 7 mapping today, the State website that's available. 8 My office, we do direct constituents there. 9 10 But just a question: 11 So when we direct a constituent, and they put 12 in their address, and what pops up is, "Project 13 completion is subject to validation by the Broadband 14 Program Office. If the 'BPO' field is empty, there 15 is no award applicable at this location." 16 What's the next step? 17 JEFFREY NORDHAUS: Sorry, could you repeat the second part of that? 18 19 I understood that we do the validation, but 20 what was the second part? 21 SENATOR HELMING: "If the 'BPO' field is 22 empty, there is no award applicable at this 23 location." JEFFREY NORDHAUS: Oh, I understand. 24 SENATOR HELMING: So what -- I mean, what 25

does that say to a constituent; what's their next step, other than to call us back and say, well, how do I get on the list?

JEFFREY NORDHAUS: Well, we can, you know, help, you know, with staff, to walk them through the website, and what the various terms mean.

But, I think you've read sort of two, sort of, maybe footnotes that are on that BPO page.

And we have a column which states the status of the BPO project.

And, if there's a star or a check, it would say, okay, there's a project that's complete.

And what we're noting is, yes, it's complete, they've told you it's complete, they're offering service. But we're not satisfied until the validation that I just -- is done.

So we want to make it clear that we're still validating it, to make sure it's done.

If there is no star there, and people are saying, well, why is it just blank? that would mean, if there's no comment there, it's either in process or it's complete. There's no other choice.

SENATOR HELMING: Okay, but why --

JEFFREY NORDHAUS: If it's blank, that means there's no BPO project, which means it's either

already served, or, it could potentially be in a Charter location.

SENATOR HELMING: -- so then there would be a second step, to go to the map, to find out if it's in a Charter location?

Why can't it just say right there, for ease, for legislative staff or constituents, you know, put in my address, you get a list of four different service providers, and then you get what I just read you.

JEFFREY NORDHAUS: I am extremely familiar with what you're saying, and I completely understand where you're coming from.

So that was also my goal for the website, as a person who likes to use websites, and have them be very easy and very simple. That would seem extremely logical.

So the way we structured the website is, you enter the address, and all existing providers are there, and the BPO provider is there.

So everything that we have access to is there.

In addition, we do have the Charter data, which is the only piece that's missing. But, unfortunately, that is subject to a non-disclosure

agreement. And we have tried very hard to, you know, have that relaxed so we could include it on the website, but Charter has refused to allow us to do that. We've asked many, many times.

I welcome any support on that. But, I have kind of tried, and can't get further on that.

But it would be a lot easier if it would be integrated into our map so a constituent could just go and find out.

So I agree.

That being said, we were able, through a lot of hard work, to at least get a separate portal which people can do, so they need to take a second step of, they go there, and if there's nothing there, there is another drop-down on the exact same page, which they can go to and see if they're in the Charter buildup.

But I do understand it's two steps, and I understand why that could be a little frustrating.

SENATOR HELMING: Thank you.

Just, real quickly, is there -- Assembly -- Assemblywoman Woerner asked about, you know, the -- getting fiber on poles.

In New York State right now, is there fiber that is up on poles, but is -- I'm not sure the

right terminology -- is it, "lit up"?

Do you we have some fiber that's installed; it's running past people's homes, it's running by business, but it's not yet, "lighted," or "lit up"?

JEFFREY NORDHAUS: Well, I know Tom can speak

more to it, but, you know, we have a lot of fiber in the state.

We have lit fiber, as you said.

And we have dark fiber, which is fiber that, you know, is generally not necessarily on the poles, but it could be underground in ducts.

Some of it is lit up, some of is it dark fiber.

In general, the state does have a lot of fiber.

The challenge that we face with this program, and, in general, that we talked about it today, is the so-called "last mile," which is getting that fiber down those streets and right in front of those homes, especially when they're very -- very sparse.

But there is -- there is sort of main -- main-line fiber, as you point out, that's out there.

SENATOR HELMING: So that last mile, I hear from constituents, like my colleagues do, about getting that last mile done. But it is frustrating

when it's sitting right in front of your home and you cannot connect to it.

JEFFREY NORDHAUS: I'm not familiar with that exact case, but I can understand that that would be frustrating. Yes.

SENATOR MAY: Okay, thank you.

I also want to welcome Senator O'Mara, and I guess he has some questions.

And just to let people know, because

I appreciate your patience, you've been here a long
time, this is the last person, as far as I know, who
has questions.

The two of us have a few brief follow-ups we'd like to do, and then we'll be done.

And for the audience, so you know, in future, as -- as witnesses come up, we're going to limit to five minutes, the question-and-answer portions for each per -- each member up here, so that we'll try to get you out of here before midnight.

Okay. Senator O'Mara.

SENATOR O'MARA: Okay, thank you, Senator.

And thank you, gentlemen, for being here today.

Hopefully, I didn't miss this, and this hasn't been covered already by the two of you, but,

I just wanted to get a sense of how you're making the demarcation between what's going to be necessary to be served by 100 megabytes per second versus down to 25 megabytes per second.

JEFFREY NORDHAUS: So the -- we touched on it a little bit, but to answer sort of specifically, the way the allocation was run was through a reverse-auction process, which we talked a little bit about that as an innovative process for allocating the State capital/State funding.

And what we did was, we looked at all the unserved areas of the state, and then we ran actions in each of the upstate regions separately.

And, basically, anything unserved was awarded funding in order of, basically, the highest fee for lowest cost. And we funded entire -- the entire program, until we had, essentially, expended all the capital. And then we expended the last, around \$15 million, for a satellite service to fill in the remaining gaps, essentially, to ensure that no one was left behind at that point.

SENATOR O'MARA: Okay.

Did that, making those determinations, how much did that, do you think, increased the cost of serving some of the areas where it might have been

cheaper to do less than 100 megabytes per second, but you went with the 100 megabytes per second?

JEFFREY NORDHAUS: Well, I think what we heard today was that the -- you know, the benefits of fiber are things that the communities really appreciate.

And so I think that, you know, what I've heard today is that, you know, people, if anything, want more fiber, not less.

So, you know, certainly, you could do satellite in the whole state and save money, but I'm not sure that would meet the objective of trying to make sure that the service is something that people are really looking for.

SENATOR O'MARA: No, but what I'm suggesting is, there's a cost-benefit analysis you can make for the more remote areas, where it would have cost X to require the fiber to be run for the hundred. Or, you could run something sub from that at a lesser expense, and cover more ground, hit more homes.

JEFFREY NORDHAUS: I see what you're saying.
SENATOR O'MARA: Yeah.

JEFFREY NORDHAUS: So, in that case, now

I understand better, we are -- our -- our program
was open to all technologies. So it wasn't, like,

100 or nothing. I mean, you had the ability to -basically, we were technology neutral. So you could
do fiber, you could do cable, you could do fixed
wireless; we had multiple different technologies.

We actually do have all of those technologies. We have fiber -- yeah, exactly, we have fiber, we have cable, we have fixed wireless, we have DSL, and we have satellite.

So we have, pretty much, every technology that I'm aware of.

And we also, from a provider standpoint, we have large providers, as large as Verizon; we have family-owned telcos; and we have electric cooperatives.

So, through provider -- you know, sort of, flexibility on our providers, and flexibility on technology, we had, sort of, opened to any type of model.

And then, according to the auction, if a, you know, less-expensive product was available, we would certainly have considered that in the auction, that would have been part of the process.

SENATOR O'MARA: Okay. I think you said you've exhausted the \$500 million funding that was appropriated to this point?

JEFFREY NORDHAUS: Well, it's been fully
deployed, it's been fully invested, yep.

SENATOR O'MARA: So that money is out the

door; it's been spent on existing working connections right now?

JEFFREY NORDHAUS: Well, it's -- we -- we reimbur -- it's been fully committed. And we -- as discussed a little bit, we -- in -- we invest the capital on a reimbursement basis.

So the providers have to go do the work, they have to complete the work, and then we do a validation. We send in a validation firm to make sure it was done properly.

Once it's done all properly, then the reimbursements can be completed.

And, so, it's been fully committed, but it hasn't fully out the door, if that make sense. But it's all spoken for.

SENATOR O'MARA: Yeah, no, I -- to what percentage has it been committed, but not spent yet, or not deployed yet?

JEFFREY NORDHAUS: Well, it's all been committed, so, you know, the full amount of the fund, less, you know, this sort of internal operating expenses of what just takes to, you know,

keep the lights on, and so forth, that is all fully committed.

And then the actual reimbursement level varies. I mean, every week we're sending out -- you know, we have a team, looks at the expenses, and, sort of, you know, once they get validated, sends those out.

So I don't have that exact data, but it's (parties cross-talking) --

SENATOR O'MARA: Well, do you have a rough idea of how much of that \$500 million is really yet to be deployed?

JEFFREY NORDHAUS: I mean, as far as, if we look at it, it's fully committed. And then it's just a matter of timing on the expenses of the reimbursement.

But nobody is waiting for these reimbursement checks to do their work.

They complete the work, and then we reimburse them when it's done. And it depends on the status of the, you know, review of the, sort of, reimbursements we get in.

Somebody says, I bought, you know, 12 reels of fiber, and I bought 18 switches, and I bought, you know, this, and we have to go through that and

validate it.

So it's just a timing issue.

SENATOR O'MARA: No, I get all of that, and maybe I'm not asking the question the right way.

But, of the \$500 million, and the private investments from the companies, what percentage of that is actually out there functioning right now, and how much do we have -- are we waiting on to be actually functioning, for consumers?

JEFFREY NORDHAUS: I mean, it's all, effectively, out there, I mean, the full five hundred.

If we looked at the stat that I mentioned earlier, you know, we've -- including the State money, the private, we require a private match as well, so it's either 50/50 or 80/20. So there's a private match. And then there's federal funding as well.

So, you know, in total, we have \$721 million of capital working on these projects.

And then that is -- in addition, the Charter projects are on top of that.

So all that money is, essentially, working for us in the field, and none of it has been held back at this point.

Did I answer that?

THOMAS CONGDON: I mean, I think one more thing to add, because of the contractual obligations of awarding the grants, there's a tremendous amount of activity and build activity that's happening in the field and already benefiting consumers.

Whether or not the reimbursement check has been cut, the fact that it was committed has resulted in the activity, the construction work, and, in many cases, already lit fiber serving customers.

SENATOR O'MARA: But you can't give me an idea of -- of what amount of work is left to be done that has been?

JEFFREY NORDHAUS: Yeah, I mean, in terms of the work that's been done -- I mean, I can -- if you want, I can give you the exact number of dollars that have been -- if you want to contact me after this, I'll give you the exact number.

But in terms of the work, the physical work, which is what I think really matters here, the Phase 1 and the Phase 2 projects are complete.

We're still going through the validations, and so some of the payments don't get issued until we validate.

And then, in terms of the Phase 3, those are 1 underway, and will be complete next year, because of 2 the need to align those with the federal --3 170 million of federal money. Federal funding took 4 a little bit -- a little bit longer to secure, so 5 those were pushed back into next year. 6 7 But all the Phase 1 and Phase 2 are, essentially, complete at this point. 8 9 SENATOR O'MARA: Okay. Do we know if the Executive is going to be 10 11 looking for further allocations in next year's 12 budget? 13 JEFFREY NORDHAUS: I don't have any awareness of the status of that at this time. You'd have to 14 15 ask others on that. 16 SENATOR O'MARA: Are you seeking further 17 allocations? 18 JEFFREY NORDHAUS: I'm just answering 19 questions, whatever, you know, the Committee. 20 I'm not here to do that. 21 SENATOR O'MARA: Thank you. 22 SENATOR MAY: Okay, thank you. 23 Just a few quick follow-up questions. I asked earlier about that technical 24

25

validation firm.

JEFFREY NORDHAUS: Yeah.

SENATOR MAY: But I blanked on your answer, whether you actually said that their report would be made public.

JEFFREY NORDHAUS: I had said that, we are working through all the reports with them. And if there's additional follow-up, I'll talk you to about, you know -- you know, I can certainly look to provide you the results of that, or to make those public in some way.

So we're happy to follow up with you on that. SENATOR MAY: Okay, thanks.

And, I know Assemblywoman Woerner didn't not want to be snarky.

I'm going to be a little bit snarky here, because I know this is directed at you, Mr. Congdon.

We -- we get a lot of complaints about

Internet service, but we also get complaints about
the PSC not being responsive to complaints.

And so I'm wondering if you have an internal process to -- to judge your responsiveness. If you have -- are taking steps to become more responsive.

If this is something that you have heard?
THOMAS CONGDON: Well, I think some of the

frustration comes from what we regulate and what we don't.

So we can be very helpful if the complaint pertains to a service that we actually regulate.

If it's a service where we have no jurisdiction, then it's hard for us to satisfy that consumer.

And so I get their frustration.

And, we need to be real clear on the phone when we get those complaints, as to where we can be helpful and where we can't be.

In some cases, even where we don't have direct jurisdiction, if it's a provider, say, providing sort of a triple play of broadband, phone, and cable, there's a complaint about their Internet service, but, because their Internet service also is the same technology that provides something that's within our jurisdiction, there, we can be somewhat helpful in trying to get the problem addressed.

It's really case-specific.

And we -- that being said, we do, to answer your question:

Track the volume of calls that we get;

How long it takes us to answer the

complaints;

How many complaints, once we've heard the initial complaint, get escalated, meaning, one party wasn't satisfied;

And then how quickly we can address the escalated complaints, and the appeals process that can follow.

And we take all that very seriously, and you know, do a lot of training with our staff, to make sure they understand where our jurisdiction is, where it isn't; how to, you know, interface with the public, and be as helpful as possible.

SENATOR MAY: Thank you.

Two other questions.

One is about this issue of the last mile.

So, thinking about how expensive it can be to -- to build out on the last mile, we passed a bill this past year about minimum-maintenance roads.

People build houses in very remote locations, often a second home, a summer home, or something like that. And then, after the fact, they want snow plowing to that home, and it's very costly to municipalities to provide that.

Do you ever take into account whether these are primary residences, or second homes, or those kinds of things, when you're thinking about, is it

1 worth it to build -- put taxpayer money into 2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

building out Internet service to remote properties?

JEFFREY NORDHAUS: We -- ultimately -- we think about it, we're aware of the issue, but, ultimately, we don't, because, at the end of the day, we believe that broadband is necessary to all homes, even second homes. I mean, the people who go there and they want to work on the weekend, and they need access to broadband.

So, ultimately, we're looking to get it to every location.

This is very important for, you know, the economy, as you know, of these local areas. sometimes it's tourism. Sometimes it might be, you know, weekend homes. I think we've talked about that.

In addition, you know, you might want to run a small business from there. You might be able to (indiscernible) -- you know, sort of -- and, also, just in terms of real estate.

You know, from a real estate standpoint, in terms of getting people in to rent your home, we've heard these anecdotes of people talk to us about, like, hey, I tried to rent my home. And they --I got all the way down to the last part of it, and

then they said, How's your broadband? And then we said, Well, we don't have broadband. And, suddenly, the deal wasn't happening.

So, from the standpoint of home ownership, of economic inclusion, all the things we're talking about, you know, they do apply to first and second homes, and -- and, you know, obviously, those are tax-paying homes as well.

In terms of, sort of, very long private driveways, we do make some accommodations for that, in the sense that, you know, if someone builds a private road, or an extremely long driveway, that might be like a 5-mile driveway, the carrier is not required to wire the 5-mile driveway. They have to do a sort of standard length driveway, which is, you know, we have a certain -- it might be 350 or 400 feet, which is the definition of -- the federal definition of a "standard driveway," which is included in the \$49.

If it's more, then custom charges can be discussed.

So there's a little bit of an accommodation for it.

But, in general, we do want to try to get broadband to all the locations.

SENATOR MAY: Okay, thanks. 1 2 And then my last quick question was about the 3 website. So I wanted to give that web address again. 4 It was bldlkup.com. Right? 5 6 JEFFREY NORDHAUS: You got it. 7 SENATOR MAY: Bldlkup, with no vowels, except the last U, dot com. 8 9 And do you have a map on the -- on your website that shows which regions of the state are in 10 11 your jurisdiction? 12 JEFFREY NORDHAUS: Just so you know, the 13 bld -- you know, that website is also embedded in 14 our website. 15 SENATOR MAY: Oh, okay. 16 JEFFREY NORDHAUS: So if you just want to 17 remember one, it's a little more intuitive, 18 nysbroadband.ny.gov. 19 So, we have a tab, a "Resources" tab, 20 drop-down menu. We have the map, we have the 21 address lookup, and we have the Charter lookup. 22 SENATOR MAY: Great. Thank you very much. 23 JEFFREY NORDHAUS: Thank you. 24 SENATOR MAY: I very much appreciate your

patience, and your good questions. Thanks. I mean,

25

your good answers to good questions. 1 2 THOMAS CONGDON: Thank you. SENATOR MAY: And next on our list is 3 Kate Powers from the New York Attorney General's 4 Office. 5 6 And as I said, from now on, we're going to do 7 a 5-minute limit on question-and-answer periods for members. 8 9 Welcome. KATE POWERS: Is this on? 10 11 SENATOR MAY: Uh, no, it doesn't seem to be 12 on. Try it. Make sure the red light comes on. 13 KATE POWERS: The red light is on. 14 SENATOR MAY: Okay. 15 KATE POWERS: Good afternoon, Co-Chair May, 16 and Thiele, and Commission and Committee members. 17 My name is Kate Powers, and I'm the director of legislative affairs at the New York State 18 19 Attorney General's Office. 20 Thank you for the opportunity to provide 21 testimony on this important issue. In December 2018, the Office of the Attorney 22 23 General entered into settlement agreements with five major providers of residential Internet service in 24

New York State: Verizon; Charter, formerly

25

Time Warner Cable; Frontier; Altice; and RCM Telecom Services.

SENATOR MAY: I'm just going to ask you to pull your microphone a little closer.

KATE POWERS: Our office's investigations, and subsequent settlements, in these cases were focused on misrepresentations by the Internet service providers that violated consumer protection laws.

Our investigation was not initially aimed at the lack of Internet service options in rural areas, though, through our investigations, we identified two issues that had a particularly desperate impact on rural areas: Lack of quality infrastructure, and the failure of Internet service providers to supply state-of-the-art customer premises equipment to subscribers.

In the early days of dial-up, Internet service was fairly universal. However, disparity in Internet service level has increased with time, due, in large part, to infrastructure disparities in more-populated versus less-populated areas.

Digital subscriber line service, more commonly my known as "DSL," offered faster service, but is largely impacted by distance from subscriber

to a centralized network device. So the service level in rural areas is typically worse than in urban areas.

It is often not economically desirable for DSL providers to repair this aging infrastructure. Some DSL customers are already starting to experience the effects of this aging infrastructure; for example, outages for several weeks at a time.

Cable Internet offered a significant upgrade, but was not available in all areas. Cable Internet also evolved in a way where disparity increased over time as cable Internet providers prioritized high-density areas for upgrades.

Fiber offered and even more significant upgrade, but is less available than cable.

As a condition of our settlement with Frontier, a provider for many rural areas, Frontier was required to invest \$25 million to improve infrastructure and/or provide consumers with access to Internet services.

While this investment was significant, and resulted in improved Internet service for 97,000 New Yorkers, to date, it likely will not be enough to solve the infrastructure issues in all of Frontier's coverage areas.

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

Charter, which operates in a number of upstate markets, also made investments that resulted in improvements for subscribers in rural areas. of the service in urban areas remains superior due to more robust network infrastructure in these markets.

Our investigation also revealed that failure on the part of providers to supply state-of-the-art modems was another reason many subscribers had suboptimal Internet service.

In the past, providers allowed, or even encouraged, users to purchase their own modems.

However, they now tend to push them into a monthly lease agreement for provider-supplied modem, often sold with the promise of ensuring the most up-to-date equipment.

The attorney general observed a pattern of prioritizing prime markets for equipment-replacement initiatives. This practice was a central focus of the attorney general's investigations, and particularly affected New Yorkers who typically -rural New Yorkers who were typically the last to get their modems replaced.

We also discovered that Time Warner Cable provided many subscribers with legacy modems.

Legacy modems can only receive data on a single data-over-cable service interface specification, (DOCSIS) channel.

A DOCSIS channel has a maximum thoroughput (sic) of 36 megabits per second.

Time Warner Cable believes such modems were sufficient for many subscribers in rural areas who were only on plans of 15 to 20 megabits per second.

And while such modems were, theoretically, sufficient to support speeds of 15 to 20 megabits per second, DOCSIS channels are shared by a cluster of users, so a single user can only get the unused bandwidth on a channel.

Our settlement with Charter required that all subscribers be provided with modems that had been shown to be capable of reliably delivering the subscribed Internet speed through field testing under normal network conditions.

Charter has now provided almost all subscribers with multi-channel modems.

The problems associated with limited band width on the channel have been greatly exacerbated by the advent of streaming video.

Early Internet usage was bursting, meaning that, for example, a user loads a website and photos

must be downloaded. The usage then drops until the next page is loaded.

In contrast, the streaming video that is more common today involves a continuous delivery of Internet packets. Streaming a movie on Netflix can require between 5 and 12 megabits bits per second, depending on the quality of the video.

By 2015, Time Warner Cable estimated that over half of all the Internet data transmitted to its subscribers was video streaming. This presented a particular challenge to subscribers in rural areas where average Internet speed was 15 megabits per second.

Since the conclusion of our investigation,
Charter has addressed this issue by phasing out
single-channel modems for almost all users.

The final issue I would like to discuss with you today that impacts access to adequate Internet services by rural New Yorkers, is net neutrality.

Net-neutrality rules provide (sic) Internet service providers from blocking, throttling, and posing paid prioritization, and otherwise interfering with the provision of Internet service.

In 2018, New York led a coalition of 22 states and the District of Columbia in suing to

reverse the Trump Administration's repeal of net-neutrality regulations, and the federal government's effort to assert preemption over state net-neutrality laws.

Collectively, the state coalition represents over 165 million people, approximately 50 percent of the U.S. population.

In February 2019, the Attorney General's Office, together with counsel for private parties and local governments, presented oral arguments in the case in the U.S. Court of Appeals for the D.C. Circuit, and a decision is pending.

A repeal of the federal net-neutrality rules will be felt acutely by rural New Yorkers who generally only have one choice of a fixed Internet service provider.

The only fixed Internet service provider operating in a rural area takes advantage of the net-neutrality repeal to block, throttle, or require businesses or customers to pay for fast lanes to service. Rural subscribers will not have the option to switch to a different provider who continues to adhere to net-neutrality principles.

While some subscribers in urban areas may be able to choose from two or three different

providers, the overwhelming majority of rural subscribers do not have such options.

Even if some rural areas might have a choice of mobile Internet service providers, mobile Internet service is not an adequate substitute for fixed service.

Thank you again for allowing me to take the time to provide testimony on this important issue.

SENATOR MAY: Thank you. I appreciate your testimony.

Are you willing to take some questions?

KATE POWERS: I can certainly take questions.

I'm not a technical expert, so I may have to take

some of them back.

SENATOR MAY: Okay.

Well, my question is fairly general, and it is, again, about the net-neutrality issue.

As I mentioned before, there is a bill that I assume we'll be taking up next year, about net neutrality within the state.

And my question is: To what extent could we affect this issue within the state, in the absence of federal support for net neutrality?

And -- and I guess, also, just in the legal arena, just with that, with net neutrality, does net

neutrality give you more latitude to help people in -- especially in rural areas, get the service that they need?

KATE POWERS: Regarding the first part of your question, we have looked a fair amount at that.

We are, as I recollect, somewhat limited in what we can do in the state, particularly, until the decision of the D.C. Circuit is -- until that litigation is resolved.

But if you have a specific bill, we would, you know, appreciate the opportunity to take a look, and give you specific feedback.

And the second part of your question involved -- could you restate it?

SENATOR MAY: Well, it was just, you make a good case for why net neutrality is a valuable thing.

Does it give the attorney general more tools to, or, how could it give the attorney general more tools to, be standing up for people who need this service?

KATE POWERS: Yeah, I'm not sure specifically it gives us more tools. But I can certainly, you know, other than us fighting in the litigation, I could certainly, you know, take that one back and

```
1
        see if there's something more, more specific we
 2
        can...
               SENATOR MAY: Thank you.
 3
               Does anyone else have questions?
 4
               No?
 5
 6
               Okay, well, thank you so much for your
 7
        testimony. Appreciate you being here.
 8
               KATE POWERS: Thank you.
 9
               SENATOR MAY: And next we have, I believe, a
10
        panel.
11
               We're going to bring a number of
        supervisors up here to be here at the same time:
12
13
        William Farber, James Monty, and Carolyn Price.
14
               I'm just checking to see if I have that
15
        right, Zack (ph.)? Was there...
16
               Okay.
17
               So, 10 minutes -- just tell me what you were
        trying --
18
19
               ZACK (ph.): 10 minutes, total.
20
               SENATOR MAY: For all three?
               ZACK (ph.): Correct.
21
22
               SENATOR MAY: Okay.
23
               So, we're going to try to keep this to
        10 minutes for all three of you. I hope that you
24
25
        can make that work.
```

1

2

3

4 5

6

7

9

8

10

11 12

13

14

15 16

17

18

19 20

21

22

23

24

25

I don't know, who wants to go first?

WILLIAM FARBER: We can go in the order that they were listed on the program.

And we certainly -- I can shorten what I had intended to say.

I think the panel has covered a lot of the issues that I was going to raise.

Chairperson May, Senators, and Assembly Members, I really appreciate the opportunity to provide testimony on the state of broadband in Hamilton County.

I'm William Farber. I'm chairman of the Hamilton County Board of Supervisors.

I would say, at the local government level, we tend to be where the rubber hits the road. people, I don't tend to get calls from them. They tend to come in my office and say, Why is it this way? Why aren't we seeing what we've heard we should be seeing?

Hamilton County is the third-largest county in the state, geographically. So, we are a huge rural challenge when you look at the size of our population. We're also 100 percent within the Adirondack Park.

We -- it's been my privilege for several

decades to serve the people of Hamilton County. And one of the most profound challenges in recent years has really been trying to keep up on the technology front.

I think it was -- I think it was nearly two decades ago, that I was in a meeting with other EMTs. I was an EMS provider for 30 years. And we were talking about cellular service, and how that would impact our ability to provide first response. How much quicker we could get on a scene. How much better the care would be that we could provide to people.

And, as we started to delve into that, it was shortly thereafter that we were confronted by one of our school superintendents in Hamilton County, that came in, and talked to the entire board, making the plea for the fact that, if we didn't find a way to keep up on the broadband front, our students, and the next generation of folks that were raised in Hamilton County, would have a decided disadvantage from an education and technology standpoint.

That, in his opinion, we couldn't afford to let that happen.

I think it's fair to say that, based on that, several of us in the county embarked upon what was

about a two-decade mission to try to figure out how to position the county so that we could keep pace on the technology front.

That mission has included multiple trips to Washington, multiple trips to Albany; talking, really, to a variety of people, where the levels of empathy have always been high for the plight of rural New York and rural America.

However, I have to confess, we didn't really start to make substantive progress until the REDC structure was put in place, the Connect New York, and the New New York Broadband Program.

Does that mean I think that we're at a perfect place in time now? Absolutely not.

You covered a lot of the challenges of the situation, so I'm skip through the portions of my testimony where I was going to talk about status of the county, because we're really not that different from what you're seeing throughout.

I think the stats bear out the fact that we are serving, through the New New York Broadband Program, 256,000 households, customers, if you will. But a full, nearly a third of that, is through satellite service.

I think we cannot treat technology as if it

was a static finish line in New York.

I think we have to think about: What's next? How do we do better?

We're the Empire State because we lead, not because we set goals and say, we're satisfied with this.

So, I think we've done an extraordinary job building far more fiber than any other state, but that doesn't mean that we should stop there.

That's really an opportunity to extend the fiber to that final mile.

It's an opportunity to look at other technologies.

You know, we jumped to a large -- for a large portion of our population, to satellite.

There are opportunities for fixed wireless that, yes, there were some Phase 3 awards, but I think we could do more with that.

Several of us are involved with a cellular task force, and some of those technologies, when you look at towers and our ability to connect up to fiber, connect up to power, and transmit those signals.

There's some synergy there that we need to be exploring as part of this, to figure how to build

out the system and the network.

SENATOR MAY: I want to make sure that your colleagues get some time too. So (parties cross-talking) --

WILLIAM FARBER: Yes.

So let me just wrap up with that point.

And then if there are questions, I'm happy to take those.

SENATOR MAY: Thanks.

CAROLYN PRICE: Okay.

All right, first of all, thank you,

Senator May and Assemblyman Thiele, for chairing

this very important topic, and all the Senators and

Assembly people that took time out, I'm sure, of

your busy schedules to do this.

SENATOR MAY: Can you pull your microphone a little closer?

KATE POWERS: I'm speaking today, first of all, on behalf, as president of the Upstate New York Towns Association. And this has been a very important goal of ours for six years, that we've been working on.

And I'm also speaking as supervisor of the town of Windsor in Broome County, a town of 93 square miles.

I am also speaking for people who make huge sacrifices every day because they have no Internet access, such as, a person that has to drive 40 miles, round trip, to do banking because they can't do it on the Internet.

My remarks will focus on recommendations to identify and reach the unserved and underserved with broadband in rural areas of New York State.

New York State broadband is delivered via wire-line technologies and wireless technologies; however, we don't know how much broadband coverage we truly have, particularly in rural areas.

To continue to move forward and have access for the unserved and underserved, we need to know, what we have, where it is, and options to reach the unserved and underserved.

Why don't we know what we have and where it is?

The maps are faulty because the FCC allows Internet providers to claim, on Form 477, an area that is served if only one home on a census block has Internet service.

My first recommendation is to work with the FCC to get a better reporting requirement so there are more accurate maps.

Mr. Nordhaus stated that New York State is 1 2 now requiring full census block, and this is 3 progress. Fiber is the optimal broadband technology. 4 There is fiber in parts of rural communities. 5 6 Do we really know where the fiber is, and where it doesn't exist? 7 Through utility-pole data surveys, we could 8 9 get answers. These surveys entail getting the GPS location 10 11 of each pole, identifying the pole numbers, finding 12 out who owns the poles, and determining what is 13 actually on the poles. 14 SENATOR MAY: I'm going to just suggest that 15 you go through your recommendations just really 16 briefly so that we'll have a little time (parties 17 cross-talking) --18 CAROLYN PRICE: Okay. 19 So what I can do is, rather than talk more 20 about the need, I'll just do the recommendations 21 from here on. 22 SENATOR MAY: Yes. 23 CAROLYN PRICE: So my second recommendation, is to fund utility-pole data surveys. 24

Recommendation 3: Require companies applying

25

for State funding to describe how municipalities were involved in the application process, and require sign-off in the application by the chief municipal officer.

And I believe Senator Helming was asking questions about that.

And I do want to show this map.

This is Phase 2, and this is our town. And the colored areas show where the funding was awarded.

And in the box is the village of Windsor, which sits in the town of Windsor. They have complete cable in the village.

The mayor was shocked also. They don't -- they didn't need fiber. They have excellent cable.

So I believe almost \$2 million was spent there.

But, down here, in the southwest corner of our town, we believe -- not sure, we need a pole survey -- we believe there's no fiber. These people are trying to exist on satellite and hotspots on their cell phone, which are spotty.

So this is why I'm saying, the municipalities need to be involved in this.

My fourth recommendation, is to move the

Broadband Program Office from New York City, or, establish a satellite office in an upstate town or village, so that people doing this work are close to the communities with the largest broadband needs.

And my fifth recommendation: Be involved with emerging technology.

Have staff from the New York State Broadband
Program Office and New York State officials study
Google's Project Moon, and consider trying an
experiment with this technology in a high-need rural
area, and I'll briefly describe it.

You can see a video on the Internet.

Google had started a project back in 2012, where they can take antennas and put them in very large balloons, that they send into the stratus sphere, about 12 miles up. They control them from the ground, and have antennas on the ground, and then they connect it to a local provider.

They're also extremely helpful if you have a disaster because they can move in quickly and help have Internet service.

SENATOR MAY: Great, thank you.

And we'll give you a little bit of extra time, let's say, four minutes (indiscernible).

JAMES MONTY: Thank you so much, Chairman.

I thank everyone for allowing me to speak here today.

I think broadband is very important, and I'm not going to go through a lot of what I wrote, because I think each and every one of you must have been in my mind at one time, because, the questions that you have asked, are questions that we have.

Again, I'm Jim Monty. I'm the town supervisor for the town of Lewis in Essex County.

I have shared this conversation with Assemblyman Stec, Assemblyman Jones, Senator Little, on several occasions.

And I will just go to the points that I would like to make.

My first concern is the fact that the energy companies in Essex County, historically, have ignored their infrastructure.

So their infrastructure is -- is, you know, old. And now they're asking these ISPs to come in and replace their infrastructure at the tune of 5,000 to 15,000 dollars per pole.

Who's holding that accountable?

That's money that should be spent on lighting up broadband, yet they need to replace the poles.

And these energy companies are getting those

poles provided for them, and yet they ask for an increase in rates.

So, to me, that's a pretty good deal for the energy companies.

So who's holding them accountable?

I think that's something we really need to look at.

Recently, we hired a consultant within Essex County to map out what we don't have.

So with -- that consultant is taking everything that is provided already, before any of the phases, Phase 1, Phase 2, and Phase 3.

Taking the information from Phase 1, and implementing it on our map in GIS mapping; Phase 2, the same thing, and the Phase 3, so we'll know what we don't have.

And we will gladly share that information with the broadband agency, because, when I took over as supervisor, it wasn't as sophisticated as GIS.

But we had a group of people that formed a group within our town of Elizabethtown in Lewis, who actually mapped out our broadband. Just, visually, mapped it out.

We provided it. I'm not sure what happened to that data.

But I think that's something that we as communities, can do.

And Essex County has done that.

Again, and I heard it mentioned here, is accountability.

Who's actually holding the ISPs accountable?

You know, I heard Mr. Nordhaus talk about
his validation, but, are they validating the census
blocks that were bid, or are they actually
physically going out and seeing what is actually
being provided?

So that would be a question that I would like the answered.

One of the last things I would like to make, and I just heard it here, local input.

At no time, in my four years as a supervisor, has anyone reached out to me and said, hey, Jim, what do you have? What don't you have in your community?

I would think that would be a great benefit, moving forward, is if there's more local input.

Lastly, I just want to leave with you an example, what this means to a small community.

The town of Lewis has 1352 residents. Very small, beautiful community, in Essex County.

We have two local businesses who are trying to get established, two small businesses.

They both could use hard-wired Internet to -for their business. They have -- their two
locations are less than a half a mile from
hard-wire, and yet they're told they have to get
satellite.

Half a mile, for two viable businesses that could employ 6 to 12 people in my town.

And I can't tell you, for a town of 1352, what 12 employees would do for us.

And, again, thank you. I really appreciate your concern on this.

Your sentiments, and your comments previously, echo how we feel in Essex County.

And we are here to help any way possible.

SENATOR MAY: Thank you.

Thank you all for really good recommendations. This is very helpful to have, concrete proposals that we can take back to the PSC and the Broadband Program Office.

Just one question that I have is:

We heard some numbers about what they estimated are the numbers of people who are not covered in this state.

But I think those of us sitting up here feel like those numbers were pretty low, actually, from what we hear in our own districts, that there are an awful lot of people who are not covered.

And I'm just wondering if any of you has actually done a census, as it were, of the -- how many people don't have coverage in your jurisdiction?

WILLIAM FARBER: We haven't specifically done a census, but I share the observation that the Committee has made.

I think there's a couple of reasons for that, from our experience.

One is, has been the significant lag time in the build-out.

As you know, we made announcements for Phase 1, Phase 2, and Phase 3 at the point when we were making the awards.

The patience that people demonstrate from there, myself included, has been tested a couple of times with now seeing Phase 3 pushed out into 2020.

That is consistent with a number of problems that we've had with the build-out, dealing with the CAF 2 funding that came through from Verizon, and the tiering of that.

Some of the problems we've had working with the Public Service Commission, to make sure the make-ready stuff happened quickly enough to get things done.

We have had the experience of the Broadband

Program Office being very helpful in some right-away

work, and helping to move those projects along. But

I think there was lag time there that stretched out

some projects.

And then, frankly, you've got those people that were left with HughesNet as the only option, that you've already talked significantly about, how frustrated those people are, particularly when they feel their proximate to the build-out where Frontier or Slic or one of the other providers are going to be, and they just aren't going to get access.

SENATOR MAY: Okay.

CAROLYN PRICE: I think I could answer it, Senator May, by -- again, by my map.

I think I heard one person say, about 17 percent.

In this area of our town, it's probably about a quarter of the population. So, it's probably somewhere around that 17 percent you heard before.

SENATOR MAY: Thank you.

1 JAMES MONTY: One brief concern I have, Chairman, if you would allow me, is the 2 non-disclosure act Charter has, for not announcing 3 what they're building out. 4 How can -- how can we know what they're not 5 6 doing? 7 I think -- I recently come across some evidence that eight locations in my town alone were 8 included in their build-out, that they agreed to. 9 10 And I know for a fact, those 8 residents paid 11 \$25,000 to have fiber run to them. 12 SENATOR MAY: All right, thank you. 13 Questions, or any others? 14 ASSEMBLY MEMBER THIELE: I have a question 15 too. 16 SENATOR MAY: Okay. 17 ASSEMBLY MEMBER THIELE: First of all, it's good to see town supervisors. 18 19 Mr. Farber, it's good see you again. 20 Having been --21 CAROLYN PRICE: We've seen each other before. 22 SENATOR HELMING: -- a former town 23 supervisor, it was the hardest job I ever had. 24 And I always used to say when I was town 25 supervisor: When I went to the grocery store, the

list I came out with was always longer than the list I went in with.

I just -- you've alluded to it indirectly a little bit, but, you know, we've had this commitment over the last three -- this three phases, and, \$500 million, and 256,000 locations.

What's your conclusion?

I mean, has this worked well?

Are there things, going forward, that we in the Legislature should be looking at to -- to, you know, change mid-course, or, do some things different going forward?

What -- what would -- what would you suggest, as we come back here in January of 2020, what should we be doing?

WILLIAM FARBER: I think it's great question.

I would probably answer it a little differently than the earlier panel did, in that I absolutely believe there should be a Phase 4.

I think we learned enough from the first three phases, that we've got some additional room to grow and get some other areas done.

I think we compensated well for the poor FCC data that was, one served, all served, for a census track.

And so we said to any provider, before they could bid on a census track, you have to serve 100 percent of the residents, the potential customers, in that census track.

That, in my area, because we have these huge census blocks in rural areas, caused some issues, where we could have gotten to some customers, that we didn't.

I will grant you, those will be tough decisions in how to get there.

But I frankly think part of this was, the funding ran out before we got as far as we ideally could have gotten.

So, my lesson learned would have been, you made progress.

Are there some issues of accountability that continue to bubble up that you need to be concerned with? Absolutely.

But we need a means to make sure that we build out further.

And I do think that the conversations around this particular issue have been really interesting, in that, it isn't a utility, and, yet, in rural areas, we probably aren't going to have competition.

And so how do we deal with that so that we

actually force the providers to do what they should 1 be doing for our customers, for the turnaround on 2 service, and those things, when there isn't 3 competition to drive them, and there isn't the 4 regulation of a utility to drive them? 5 6 How do we get the outcomes that they 7 promised? SENATOR MAY: Okay, and quickly. 8 9 Are we running the time, (indiscernible)? CAROLYN PRICE: I think, also, we need to 10 11 stop and know where we are. 12 I don't know if you're aware: 13 Of course, the federal government provides a 14 lot of money also. 15 In 2018, they realized they didn't know where 16 they were, and they stopped their funding, and did 17 an assessment of where they were. And I think we need to put the money there 18 19 first, and then, I agree, move on. 20 But, I'm concerned that we truly don't know 21 where we are right now. 22 SENATOR METZGER: Have a bill to require that 23 assessment. 24 ASSEMBLY MEMBER THIELE: Thank you.

SENATOR MAY: Okay.

25

```
WILLIAM FARBER: Thank you.
 1
 2
               SENATOR MAY: Senator Metzger.
               Oh, anybody on this side want to ask
 3
        questions?
 4
               No?
 5
 6
               (Indiscernible) folks who want to talk?
 7
               No?
 8
               All right, I guess that's it.
               Thank you very much.
 9
10
               WILLIAM FARBER: Thank you.
11
               CAROLYN PRICE: Thank you.
12
               JAMES MONTY: Thank you very much.
13
               SENATOR MAY: And thanks for your specific
        recommendations. That was really helpful.
14
15
               We're going to take a little break, say, a
16
        10-minute break. And then --
17
               SENATOR SEWARD: Your timing's perfect.
               SENATOR MAY: That's right.
18
19
               -- and when we come back, we'll have our next
20
        witness.
21
               Thank you.
22
                   (A recess was taken.)
23
                   (The hearing resumes.)
24
               SENATOR MAY: Thank you, everyone.
25
               Our next witness is Jen Gregory from the
```

Southern Tier 8 Regional Board.

JENNIFER GREGORY: Thank you, Senator May.

And thank you to the Rural Commission, and this Committee, for accepting these comments today.

A lot of what folks have talked about has been discussed, so I'm going to brief what I brought on paper here.

I just wanted to showcase a map, to show you where I'm coming from here in the Southern Tier, because our name is a little vague here.

But, we represent the counties of Broome,
Chenango, Cortland, Delaware, Otsego, Schoharie,
Tioga, and Tompkins, south of the thruway and north
of the PA border.

That area is home to just under 580,000 residents. The five small cities you may recognize there, Binghamton, Cortland, Ithaca, Norwich, and Oneonta.

Outside of those five small communities, the population is just 84 people per square mile.

So we're pretty rural, and sometimes we are not quite recognized for that.

I am coming from the regional board. We're where one of ten in the state, your regional boards, that help with long-term planning issues.

We also are the local partner for the

Appalachian Regional Commission, and that's your

federal funding partner; state, local, and federal.

And the Department of State is the office that we work with from the state level.

This organization, Southern Tier 8, has been working with this issue, trying to raise awareness over the last 15 years for this.

And we were one of the key agencies to work in development of the Southern Tier Network, the municipal open access fiber -- dark-fiber ring.

I think we discussed some of the challenges.

Our terrain and our small population we have, which is relevant to a lot of the folks around here.

And I think the New New York State Broadband
Program, what that's represented, maybe most of all,
is an experiment of disinvestment in rural
New York State.

I think that was a great effort to say, look, we're offering incentives.

If you build your private-sector business, your last mile in our community, we will help you fund that.

And now we're left with communities that are still unserved.

And Caroline Price was right to the point, where we don't know where the -- that map area is.

On the state's Broadband Program Office map --

And they do have a beautiful map. They've made a lot of headway in the past year with that.

-- but the problem and concern that we have is that, they're considering satellite as a service that's -- that's doable for the communities.

And it's not. Clearly, we're still caught in the digital divide.

If you -- if you're from the Southern Tier and you call up HughesNet for satellite service, they'll be happy to offer that at \$80 per month.

And I think this is a little bit higher than what the goal was when we started the New New York State Broadband Program.

But they'll also tell you the bandwidth for instant gaming, so if you have children with Xbox or PlayStation, this will not work for them.

So that's a disadvantage to our younger generation that we would like to have here for our families.

Second, that technology does not support VPN.

"VPN" is your virtual private network.

So if you come north, and you'd like to tie into your service downstate, if you're vacationing, that log in, that won't work.

Or, if you have two office locations that are secure, that you'd like to serve, that technology won't -- will not work.

So the satellite doesn't work for the status quo, nor for any future growth.

And I think that's the big misnomer with this: It's not good enough.

If you do have Time Warner, or Spectrum, or -- all under Charter now, if you're fortunate enough to have that fiber run, most residents are paying \$200 a month for that service of triple play.

However -- and this puts us at a disadvantage, too, when we want to encourage folks to stay in New York State, because, in other areas of the country, that's offered for \$70 a month.

Those are some things that we talked about when the New New York Broadband Program rolled out.

And it's kind of been put in the background at us: Did we achieve our goals?

The -- again, the claim of being served, this was touched upon too, the telephone poles.

Some of the companies work together very

well.

We need that map, because we have an issue with redundancy.

The same -- in the same areas that fiber is being run, and in the most rural hard-to-get areas where the return is not that good, there isn't fiber run there at all, even with that investment.

I guess our other challenge too, is our limited local resources.

We do not have the community capacity to be checking up on the Broadband Office, and then requesting this assistance.

The -- I'd like to bring up just the Southern Tier Network model, to give you an idea that that has worked.

In Elmira city schools, where Verizon was projected to increase their service in 2013, at \$230,000 a year, the Southern Tier Network brought that to the school district for \$64,000 per year.

SENATOR MAY: So I'm going to cut you off there, in the interest of time --

JENNIFER GREGORY: Sure.

SENATOR MAY: -- because we need to stick with this.

But I will ask you, as my first question, to

say a little bit about this -- the -- how does the Southern Tier Network work, and, is it a model for the rest of the state?

JENNIFER GREGORY: Absolutely, I think it's a model. And I'd like you to look at the other resources you have.

Not only do you have the Broadband Program Office, but we have probably one of the best GIS clearing-house teams in the state.

They can map -- when you combine what the Broadband Program Office has, and the clearing house, they can map to the parcel.

And the county GIS administrators that are there can help you achieve that broadband-pole model there, to assess where you're at.

Maybe it's time to look at that municipal model and say, okay, we know, in rural areas, that we've had the best private-sector investment possible.

Maybe we look at a public-infrastructure model, statewide, and not put that burden on each municipality to solve, but say, statewide, these are the pieces, these are the blocks, that are in satellite coverage that still need your help.

SENATOR MAY: Thank you.

ASSEMBLY MEMBER THIELE: Carrie.

ASSEMBLY MEMBER WOERNER: Thank you so much.

So, in this Southern Tier Network model, I'm a little confused.

JENNIFER GREGORY: Sure.

ASSEMBLY MEMBER WOERNER: In the Southern Tier, can municipalities band together to seek grant funding from the federal government to build out their own municipal utility network?

Is that what you're saying?

JENNIFER GREGORY: Absolutely.

And, unfortunately, what's happened is -- and we attempted that back in 2009, under ARA stimulus funding, to build a 200-mile loop that would go across all of the eight counties to do so, and have that dark-fiber ring, so you could run the long stretches of fiber from community to community. And then that would make it affordable for the smaller Internet service providers to build within their communities.

This also gets run to hospitals, schools, the universities, 911 centers, as well.

The tough part is, is that some of this build-out has happened in the state program has. So all the anchors to achieve that return on investment

have kind of been cherry-picked.

So now we're left with very rural stretches without those anchors to support and make that business model work.

ASSEMBLY MEMBER WOERNER: So were you -- were you granted special authority to be allowed to do this, or, can any combination of municipalities work together and apply for this funding and build out their own regional networks?

JENNIFER GREGORY: We did -- we worked through the two regional boards, Southern Tier 8 and Southern Tier Central. And because of our board structure, and representatives of each of the legislative bodies, they were able to work through our non-profit, and, essentially, create their own non-profit, to apply for this funding.

We had a plan in place, where we had a solid map, because -- and they started collecting this data back in 2005, to say, where is this fiber not run?

There was not a need for investment.

They fought that case, and applied for federal funding to roll out this infrastructure.

This -- and Southern Tier Network was also one of the recipients, from 2013, before the

1 New New York State Broadband Program rolled out.

So they received state and federal dollars?

And we piecemealed another application through the New New York State Broadband Program, that was awarded in the first round of funding.

ASSEMBLY MEMBER WOERNER: Okay.

I'm sure I can get your contact information.

JENNIFER GREGORY: Absolutely.

ASSEMBLY MEMBER WOERNER: I'd like to understand more how that whole thing got set up, and how we would make that be a statewide model.

JENNIFER GREGORY: So, at a non -- if you had a non-profit office that would be dedicated to this, because, right now, Broadband Program is through Empire State Development. Maybe it's not.

I don't know if there's anything in the legislation for that.

Or, your Association of Counties, that may be a method to start that, because they would still need to assess, and then they would have -- you would have that input from a smaller municipal level, to assess, these are indeed where the gaps are, and, yes, we need this to go to the Legislature.

The funding mechanism that may be also useful

is through, Department of State has the 1 shared-services program. And this seems like a 2 really good approach for the municipalities to share 3 this service. 4 5 You know, as we develop technologies with 6 automated cars, weatherization on DOT roads, this 7 fiber, this infrastructure, runs along our roadways, those telephone poles. 8 9 Maybe through the Department of Transportation, and Department of State through 10 11 their shared services, maybe there's a method there. 12 I'm not familiar how that's structured, 13 but... 14 ASSEMBLY MEMBER WOERNER: Okay. Thank you 15 very much. 16 JENNIFER GREGORY: Thank you. 17 SENATOR MAY: Does anyone else have 18 questions? 19 I did want to say, in talking to Jen, that 20 one thing that came out is that -- the 21 Appalachian -- what's the -- what's the funding 22 source? 23 It's not available to most of the state.

It's only in that Southern Tier region that --

JENNIFER GREGORY: That's correct.

24

25

The Appalachian Regional Commission runs 1 along the Southern Tier, from Lake Erie, over to 2 Schoharie County. 3 And we were dedicated through this, and 4 seeing what's happening in the other parts of the 5 6 county that gave us a head-start. However, still at that local level, we didn't 7 have the capacity to implement as much as we wanted 8 9 to. 10 SENATOR MAY: Okay, thank you. 11 Anyone else have questions? 12 ASSEMBLY MEMBER THIELE: A question. 13 JENNIFER GREGORY: Sure. 14 ASSEMBLY MEMBER THIELE: So I had to Google 15 this while I was waiting to ask you a question. 16 But -- so Southern Tier 8, you're like under 17 the general municipal, you're a regional planning 18 agency? JENNIFER GREGORY: Correct. 19 20 ASSEMBLY MEMBER THIELE: Right? 21 And then you use the intermunicipal agreement 22 provisions to kind of put all of the counties 23 together? 24 JENNIFER GREGORY: Absolutely.

And you have ten of those too, under the

25

New York State Association of Regional Councils that 1 cover most of the state. 2 ASSEMBLY MEMBER THIELE: Okay. 3 JENNIFER GREGORY: So we have a team too. 4 We have addressed state issues with DEC in 5 6 meeting their stormwater requirements. 7 So --ASSEMBLY MEMBER THIELE: MS4? 8 9 JENNIFER GREGORY: Pardon? 10 ASSEMBLY MEMBER THIELE: MS4. 11 JENNIFER GREGORY: The MS4. 12 ASSEMBLY MEMBER THIELE: Yeah. 13 JENNIFER GREGORY: So we have that structure 14 in place, and we work with DEC. 15 And we could also be structured that way 16 through different funding programs, whether you run 17 it through the CFA --ASSEMBLY MEMBER THIELE: You had a unique set 18 of circumstances. Right? 19 20 You had this intermunicipal agency that you 21 set up. And then you're part of this Appalachian, 22 you know, and you're in that zone too. So all of those things kind of --23 24 JENNIFER GREGORY: But those councils 25 (parties cross-talking) --

1 ASSEMBLY MEMBER THIELE: -- still sounds 2 cumbersome, though. There should be a simpler way to do this. Right? 3 JENNIFER GREGORY: It should be simpler. 4 It should be simpler. 5 6 -- but you do have those 10 organizations 7 covering most of your rural areas, that could provide assistance at a local level. 8 9 And then we report to our boards. 10 ASSEMBLY MEMBER THIELE: All right. Thank 11 you very much. 12 JENNIFER GREGORY: Thank you so much. 13 SENATOR MAY: Thank you. 14 Next we have Lynn... 15 LYNN GISLASON: Gislason. 16 SENATOR MAY: ...Gislason --17 Thank you. -- a resident of Port Byron, New York. 18 19 LYNN GISLASON: It's Icelandic. Nobody 20 pronounces it correctly. 21 Hi, my name is Lynn Gislason. I live in 22 Port Byron, which is in the town of Montezuma. 23 And I would like to thank Senator May for 24 this opportunity to come here and speak with all of 25 you.

I'd also like to thank Senator Helming and her office for giving me a focus for my frustration with this issue.

On May 17th I contacted Spectrum, spoke with a very nice woman, who informed me that I was eligible for broadband services.

She convinced me to get cable, Internet, and home phone service through Spectrum. This was all supposed to be installed on June 1st.

On June 1st, a technician came out and suggested we run the line under the driveway.

As a result, we would have to wait till that was completed.

That was completed on June 7th.

I then called to set up another installation.

And on the day of the install, I got a call from Spectrum, and a technician named Dave told me that I couldn't have cable, so the appointment was canceled.

I made several calls before I knew I had cable -- because I knew I had cable, because it had been installed beneath my driveway and connected to my house.

All in all, I have spoken with no less than 30 Spectrum employees who are telling me different 1 things. All of them read my call history in their system, and they all seemed surprised and confused 2 with what they referred to as "in-fighting" going on 3 between departments at Spectrum. 4 I finally spoke with someone named 5 6

William Locky (ph.) at the local Auburn office.

He explained that the Town of Montezuma didn't have a signed video franchise agreement.

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

I contacted the town supervisor, John Malenick, who stated that he had not been presented with one; however, he was open to signing it.

I called Mr. Locky back, and asked if I could speak directly with their legal department, to get this signed.

I was later told that the area VP of Spectrum was applying for a waiver to install my cable, due to all of the problems, and that should only have taken a couple of days.

That was June 12th.

It's now September.

My calls then began going to Mr. Locky's voicemail more often than not.

Based on the assurances from Spectrum that I would have service, I canceled my DirecTV and

Verizon home telephone service.

I was put in touch with John Bubb (ph.) from Spectrum, who attempted to help me.

He explained, there was confusion between the Spectrum sales team and the Spectrum technology team, and I was the unfortunate victim.

I live just over the border between the town of Aurelius, in the town of Montezuma.

The company that Spectrum subcontracted with to run the lines unknowingly ran the line into the town of Montezuma.

Therefore, when I would call Spectrum, their service team -- their sales team would tell me that I was serviceable. But when it went out to the technical team, they realized that the Town of Montezuma doesn't have the signed video franchise agreement, and, ultimately, canceled multiple install appointments before all of this was discovered.

In an attempt to get this moving along,

I tried to connect all of the parties to get this accomplished.

Spectrum has now presented the Town of Montezuma with a right-of-way agreement. This agreement would allow them to continue to lay

additional cable, turn my service on, as well as 19 to 20 other households who are also in my predicament.

The Town of Montezuma could then work out the details of the video franchise agreement.

I attended the town meeting on August 20th, and was informed that the attorney, Kevin Cox, is not authorizing the town supervisor to sign off on the right-of-way agreement due to some pipes that were damaged by Spectrum subcontractors, as well as wanting to work out the financial video franchise agreement money that they would get.

It is now the rural community that is standing in the way of this moving forward over the issue of reimbursement from Spectrum for some damaged pipes.

I'm being used as a pawn in this situation while I am trying to get this accomplished.

In the meantime, I have no cable, no Internet, and now no landline service, since June 1st.

If the town supervisor would sign the right-of-way agreement, and someone at Spectrum could flip a switch, this problem for me and several others in my situation would be solved immediately,

and Spectrum could continue to work on laying more cable.

I was on the phone with Mr. Bubb again

September 6th, because I'm still trying to get my

Verizon service back now, and they need to port my

phone number back.

The problem is, Spectrum never turned on my account, so they can't release my phone number. So now my phone number is even being held hostage.

And I call Iceland a lot, and I'm racking up a huge amount of long distance bills.

It has not only been inconvenient and frustrating to be dealing with all this unnecessary nonsense, but it has caused me to be out of pocket a lot of money.

I continue to not have any television provider because have I to sign up for a one-year contract. And I'm hoping to get this issue resolved.

My two daughters attend the Port Byron School District.

Our school superintendent,

Neil O'Brien (ph.), has ensured that our school has

cutting-edge technology available to students.

Every single student in our school district

is given a Chromebook from the school to complete cool schoolwork.

My daughters are in the top of their classes in the ninth and tenth grade. Both of them are taking online college courses this semester. And it is not made any easier with the lack of broadband service in our town.

I have spent countless hours trying to be helpful and solve this issue. And the Town of Montezuma won't help me, and Spectrum can't help me.

And I'm hoping someone can.

Thank you.

SENATOR MAY: Wow.

Thank you for recounting that harrowing tale.

We are not able to help with a very local issue like this, but it seems like your issue, there -- it will resonate with a lot of people in this state who are having similar problems of crossing jurisdictions, or -- or just simple frustration with trying to reach people who can help.

So I very much appreciate you bringing this to our attention.

Is there anybody who wants to ask a question?

SENATOR HELMING: I would like to make a

comment.

Lynn, I want to thank you so much for coming out and sharing your frustration with your service provider -- sort of service provider.

You want them to be your provider, but you're not getting anywhere with it.

And I think this highlights just another area where we have these gaps, and people fall through the cracks, for one reason or another.

It seems like, in our rural communities, if it's not, you know, poor satellite service, it's that you're at the end of the road, or, there's service running by you, but you can't connect to it.

There's one issue after another.

And I think this hearing will help address some of those issues.

But also, as I said to you, I appreciate you reaching out to Senator May, to testify here.

And now that my office is aware of it, as I said, we can help you with this as well.

And I know you're going to your local town board this evening.

JENNIFER GREGORY: They love me.

SENATOR HELMING: I wish you the best of luck.

Keep me in the loop, let me know how it goes. 1 JENNIFER GREGORY: I will. 2 3 SENATOR HELMING: Thank you. ASSEMBLYMAN SANTABARBARA: Uh, yeah, I want 4 5 to thank you for coming and sharing your story as 6 well. 7 Now, your Assembly member, do you know who? JENNIFER GREGORY: I don't, actually. 8 9 ASSEMBLYMAN SANTABARBARA: Okay. I was going to reach out to them as well, if 10 11 you knew. 12 JENNIFER GREGORY: Okay. I would appreciate 13 that. SENATOR HELMING: I -- we're all set. 14 15 ASSEMBLYMAN SANTABARBARA: Okay. 16 JENNIFER GREGORY: Oh. 17 I didn't know if there was someone else I was 18 missing. 19 SENATOR METZGER: Right. 20 And I just want to mention, you know, it's 21 really -- they've been a disservice provider in so many ways in my district. It's -- I mean, we have, 22 23 regularly, get complaints about Spectrum and their 24 service. 25 And that's a huge issue that we're -- not

just about broadband access. It's about the service 1 2 you're getting from the company. And it is -- you know, it's they control that market. 3 So, that's something we need to address. 4 JENNIFER GREGORY: You mentioned HughesNet 5 6 before. And we used to have HughesNet. And I wanted to make a T-shirt that was of my 7 kids yelling, "We're out of Internet now." 8 9 So... SENATOR METZGER: Right, exactly, yeah. 10 11 SENATOR MAY: All right. Thank you very 12 much. 13 ASSEMBLY MEMBER THIELE: Thank you. 14 JENNIFER GREGORY: Thank you. 15 SENATOR MAY: Next we have Rebecca Miller and 16 Chris Ryan from CWA. 17 REBECCA MILLER: Good afternoon. SENATOR MAY: Hello. 18 19 Thanks for your patience. 20 REBECCA MILLER: Thank you to you all. 21 Are you ready? 22 SENATOR MAY: Yes. 23 REBECCA MILLER: I want to start by thanking the Chairs, Senator May, Assembly 24 25 Member Santabarbara, Assembly Member Thiele, and, of

course, the entire Committee, and the Commission on Rural Resources, for this important hearing, and for inviting us to testify.

My name is Rebecca Miller. I am the deputy legislative and political director for New York State, for CWA District 1.

District 1 represents more than 145,000 workers, belonging to nearly 200 CWA local unions in New York, New Jersey, and New England.

Our members work in telecom, health care, higher ed, manufacturing, broadcasting, cable television, commercial printing, newspapers, and state, local, and county government.

Nationally, CWA represents over 500,000 workers in these industries.

I'm pleased to be joined by Chris Ryan, who is the president of CWA Local 1123, which is based in Syracuse, and represents nearly 700 workers, mostly at Verizon.

Chris has been an outside plant technician at Verizon for the past 22 years. He also represents the town of Geddes and the city of Syracuse, and in the Onondaga County Legislature, where he served for the last 10 years.

Without question, broadband is an essential

infrastructure of the twenty-first century.

Given the opening statements provided by you all, it doesn't seem like I need to convince you of that.

In terms -- it's essential in terms of economic development, education, health care, public safety, and all of the things listed today.

Additionally, it doesn't seem that I need to convince you that there are many communities, particularly rural communities, who have been left behind.

This is due to more than three decades of deregulation which have left policymakers with few tools to require universal deployment of affordable high-speed networks to all communities.

The promise of the Telecom Act of 1996, and the subsequent deregulatory measures taken by the New York Public Service Commission, was that deregulation would open the telecommunications market to robust competition, which would, in turn, guarantee customers the most advanced services at the most affordable prices.

For millions of New Yorkers that promise has gone unrealized.

Without competition or regulatory oversight,

cable monopolies can charge high prices, deliver poor service, and have fewer incentives to invest in new services and technology.

Furthermore, they can displace good union jobs with lower wages, and often contracts labor employment, as we've heard in the last case.

CWA is absolutely committed to affordable broadband access for every New Yorker, and good jobs in the industry.

But most of our efforts to encourage Verizon to build out its fiber network beyond current service area in New York have fallen short, besides the company's agreement last year to build 18,000 units as part of Phase 3 of the New York State Broadband Program.

This is due to deregulation and the deregulated environment in New York State.

The reliance on competition alone has resulted in a lack of good data, a lack of good policy-lovers, to ensure universal high-quality service that meets the needs of all New Yorkers.

Too many communities are being left behind, particularly in rural areas where costs are higher and in upstate cities where median incomes can be lower.

Broadband policy must recognize that competition alone results in market failures and a race to the bottom for workers.

The achievements of the New York State Broadband Program should be applauded.

When the program launched, 30 percent of

New Yorkers lacked access to broadband. This lack

of broadband coverage was most acute in the upstate

RADCs.

Over the course of three phases, the Broadband Program provided a total of 487 million to subsidize broadband deployment to approximately 255,000 units.

Frontier won a total of 46.7 million to build out to 19,000 units, while Verizon, during Phase 3, won \$85.3 million to deploy broadband to 18,000 units.

In addition, Verizon voluntarily agreed to wire an additional 21,500 homes in areas contiguous to the subsidized areas, as well as 7,000 additional homes on Long Island, and 4,000 in the mid- and upstate regions.

As a result of the state Broadband Program, the State now claims that there is universal access; however, we know that far too many New Yorkers lack

access, or experience inadequate speeds, or are forced to pay too much due to lack of competition.

As we've heard today, it's clear that, from the discrepancies between the State's assessment of universal access and the complaints legislators are hearing from their constituents about lack of access or poor access, that we need better data.

We already heard about census blocks, so I won't tell you about those.

But, the point is, at the very least, that we need more granular and more accurate data to identify which areas do and do not have access to true broadband and true broadband speed.

It's worth noting that 25 megs up and 3 megs down are, actually, relatively low speeds, compared to what other folks experience throughout the world.

So, according to one recent study, residents of Taiwan enjoy average Internet speeds of 85 megs up.

Residents of Sweden get slightly over 55.

And in most competitive markets of Verizon FIOS, you can see a standard package of 100 megs up, 100 down.

And if you're willing to pay for it, you can go as high as 940 down and 880 up.

CWA is committed to affordable broadband access.

In addition, we are weary of unproven solutions.

We understand the desire for localities that have not seen broadband deployment by private cable and telecom companies to look to municipal fiber to fill the gap.

However, with some exceptions, most publicly-owned municipal broadband projects have not been successful.

Burlington, Vermont, and Provo, Utah, are two well-known examples of failed municipal broadband.

There has been some success in cities where municipal utility has experienced delivering electricity to customers' homes, and sometimes in smaller communities.

Even the extremely well Google Fiber, which is really well capitalized, has dropped its plans to build fiber networks beyond a handful of cities.

The widely-cited example of Chattanooga,

Tennessee, has unique characteristics. It is

operated by a municipal electric utility that was

created during the Great Depression, and their

municipal network received a significant amount of

federal funding, thanks to 2009 federal stimulus package.

There are some workable models for municipal broadband, but municipalities should also carefully examine the feasibility of launching those programs.

Municipalities might look towards

public-private partnerships which are less

financially risky than owning a network outright.

Partnership between Verizon and the City of Boston allowed Verizon to build their network through the One Fiber Initiative, that expanded residential broadband and provided the city with smart transportation technology.

CWA continues to support a regulatory regime that holds incumbents accountable to build universal, quality fiber Internet and telecom network. But in the current regulatory environment, such tools do not exist and large gaps persist.

If and when communities embark on municipally-owned fiber projects, we believe they should include:

Creating a public-private partnership;

Competitive bidding process, to select one or more public entities to build and operate the

network, in exchange for access to the public

infrastructure;

Guaranteed government contracts, and possibly some public funding.

However, we want to emphasize that wherever public funds are being invested to build out broadband, strong labor standards must be implemented.

At a minimum, we believe that muni fiber projects must be covered by a project labor agreement and other strong health and safety training standards.

At the same time as communities and consumers are seeking high-speed wired connections, wireless companies are deploying hundreds of thousands of small cells on utility and light poles to increase the capacity and pave the way for next-generation 5G.

It should be noted that 5G is still in development, and a wireless connection is no substitution for fixed broadband, and, therefore, it may not be a good solution for rural broadband.

However law and policymakers decide to move forward, we encourage you to implement strong labor standards to protect workers and ensure quality service.

It must be grounded in policies that support the growth of good jobs, fair labor standards, and respect for workers rights in the telecom industry.

To achieve these goals, state legislatures should require that any recipients of public funds or other public-support mechanisms designed to foster broadband infrastructure investment, and any recipients affiliated enterprises, contractors, or subcontractors, abide by the following four labor protections, and then I'm done, I swear:

- 1. Pay prevailing wage and benefits;
- 2. File certified payroll records, which will be made available to the public;
- 3. Comply with all federal, state, and local laws and regulations, including, but not limited to, those involving labor, employment, environmental, and workplace health and safety;
- And, 4. Respect existing collective bargaining agreements and related telecom work jurisdiction.

We're super thankful to be here, and grateful for this opportunity.

And we're committed to being an engaged stakeholder throughout the process.

Thank you very much.

SENATOR MAY: Thank you so much.

And I appreciate having someone from my district here, so, Chris, thanks for being here.

CHRISTOPHER RYAN: Thank you, Senator.

SENATOR MAY: Using my questioning time,

I want to ask you to talk about, how -- how good a
job are we doing with the labor practices in -- in
building out broadband in our district?

CHRISTOPHER RYAN: Well, let me just say, specifically, I think we're -- as far as the labor practices go, labor standards specific to our area and our union local, I think we're doing well.

I think signif -- more specifically, where we're doing the broadband in our area has been -- has been good.

And I understand that the -- the -- the -- I guess the -- the number of people that are getting on the network is good. Right?

So we're going down to areas that are more rural. We're going down to southern parts of Cayuga County, Onondaga County, north up to Oswego County.

But, you know, as far as that goes with Verizon, but I can't speak to other companies that are doing it.

I know that there are, kind of, contractors from out of state that are doing other places for other companies.

But -- as far as the labor practices go.

But I will say, though, and specific to our area, we do have a significant -- we have one of the five call centers, fiber solution centers, a little plug for the town of DeWitt and Senator May there.

So we employ over 350 people.

And I think that that speaks to the heart of, you know, Assemblyman Santabarbara's opening statement about jobs. Right?

We have, right now, about 40, or -- close to 40 or 50 new temporary employees that have been put on for this area, and they're linemen.

You know, I'll say my -- my father started in with New York Telephone when he -- in 1968.

He was in the Navy, he was a seabee. He came out and said, okay, your job's at the phone company.

And then when I started there, I didn't really want to make a -- plan on make a career out of it.

But I -- I'm -- also, I've been a lineman for over 20 years, and not doing a lot of it now, as my current role as president of the union local.

But we have a new group of -- and I'm old, right, so we'll call them "kids," and they want jobs too.

So, I'm really, really, really, really looking forward to employing this next generation of people that want to come up and do this type of work, because it's not easy work.

But -- the point, but it's not just the linemen. Right?

The linemen build it.

To the -- Senator Helming's point, firing up and lighting up the cable splicers, to the inside people who install and maintain it, to the 350 members -- 300 members that we have who do the customer service and technical support, it's a really good job opportunity, and I think it's worth noting.

I think that that's -- and, again, I can't stress enough that we -- you know, we're happy that Verizon is building, and I think it's significant.

And I just hope that we do more.

And, lastly, I'll stop right now, but, they -- you know, (indiscernible) have -- that's the good news.

The bad news is, we have a long way to go,

and I don't need to convince anybody up there that there are pockets without.

And, you know, we go all the way from Madison County, to the Monroe County border, north to Oswego, and down to Penn Yan, Watkins Glen. And there are people that can -- I mean, we can talk about who gets what service, 98 percentages.

But, if you want to talk to the people that are very, very frustrated because they're living off of DSL, or less, then that's not a good option.

SENATOR MAY: Let me just follow up.

So I understood, from your testimony, basically, you want better regulation of -- of Internet providers, but not necessarily municipal broadband programs.

But, that was where I was going with this.

I -- we just heard a harrowing story from somebody who lives on the border between two municipalities. And there are all -- and we often hear, like someone just said to me, you know, we have poles on our property with fiber on them, but can't get it connected to our house.

So I'm wondering, from the labor standpoint, do you run into this a lot?

And -- I'm just wondering, you know, is

there -- is there a role for the -- for the lineworkers, for example, to have input into where we could -- how we could do this better, and more efficiently provide to homes.

Does that make sense?
Either one.

REBECCA MILLER: I mean, is the question, is there opportunity for people who are directly participating in the (indiscernible) to -- to impact?

Absolutely.

I think we're -- we're absolutely member-led and member-driven. And the experience of our members is critical to all the work we do, and any policy proposal that we would ever support.

CHRISTOPHER RYAN: I'll speak for the lineworkers.

The lineworkers of Verizon and CWA Local 1123 would gladly wire up everywhere, anywhere, and however they could do it, not just because a shameless plug for our union local. That's not what I'm saying. What I'm saying is, it provides an option. Right?

We just heard this horror story from Fort Byron, where we got somebody across the street

didn't have it.

That happens everywhere, that happens every jurisdiction.

It happens in the city of Syracuse, where, in the town of DeWitt, they have it. But, across the street, literally, they can't, and it's there.

Like, literally, that is across the street. And I -- you can have an option for the TV. You can actually have high-speed Internet, but I don't have the same opportunity, and they won't.

So I think that, you know, competition, if competition flourishes, then I think that drives down the price.

I think that consumers have a significant advantage, in that they can have high-speed

Internet. And they can also have, not high-speed

Internet, but -- but world-class Internet.

So we're -- we're --

SENATOR MAY: Thank you.

CHRISTOPHER RYAN: -- you know, and I'm --

SENATOR MAY: I've gone over my time, so

I have to call myself on that, and see if anybody
else has a question?

Let's start with... oh, go ahead.

Assemblyman Salka.

ASSEMBLY MEMBER SALKA: Thank you.

Thank you, Senator May.

In my 19 years of public service on the school board, as town supervisor, and now the privilege of being a state Assemblyman, I found that some of the best places to get information on your community are at the local coffee shop or barber shop or convenient store.

And in my town, I have an opportunity to talk to some of the workers for Frontier. And one of the biggest complaints that they have is that, as they're getting older and retiring, they're just not getting replaced, or, the job-training programs that should be available to the new -- to the new linemen and to the new workers is -- is slow in coming.

Is that a problem that you see across the -- across the industry?

Because now we have wait times of, two, three, four weeks to have a repairman come out to your home and to work on a very vital service, obviously.

So is this something -- from your standpoint, you are on the front lines with the workers, is this some something you find in -- across the industry, that they're just simply not replacing?

And, of course, their complaint is, the money is going to management.

I can't say that for sure, but I know that these guys, men and women, are burning the candles at both ends a lot of times, in all kinds of weather. God bless them for what they do.

But, do you notice that being something that's kind of chronic to the industry?

CHRISTOPHER RYAN: Yes, I'm going to say

that.

And to a town board I was -- before I was on the county legislature, I was six years on the town board too.

ASSEMBLY MEMBER SALKA: Thank you.

CHRISTOPHER RYAN: So I'm with you. Right?

So that's the heart of democracy -- right? -in the coffee shop too.

But, yes, we do see that.

I mean, we have -- previous to this new round of line -- line -- linemen that were put on, and there has been a couple installation repair technicians put on, we never -- we hadn't hired anybody since, I think, 1998.

So, I mean, there is a significant gap. And there's -- you know, with the aging workforce, and,

you know, I've been there for 22 years, and I'm 46, but, I mean, I'm not slowing down yet, but there's a lot of other people who are.

And I'm hopeful that we can replace them.

But I don't -- you know, it is, there was a point in time where there was also, I think, deregulation has a little bit of a play in that too, where we used to have service-quality standards, that -- that companies were fined for lack of those service-quality standards.

And then when those went away, I think the willingness to spend money to repair went away, and that's industry-wide.

But I think, going forward, I think we have an opportunity.

I would like to -- I -- I think, going back to how to connect to the New New York broadband, if we're adding more customers, and more customers are signing up, and more rate-payers, then I think we have an opportunity to hire more people, which, again -- again, is, in the sense, the return on -- on the -- on the investment.

If we're incentivizing companies to add the infrastructure and provide a service, and consumers are willing to purchase that service, then -- you

know, then -- then we're hiring more people to do
it.

And, you know, we pay, because we're union, and we negotiated a very -- well, I think the best contract, we -- it's a -- it's a significant compensation.

REBECCA MILLER: I do just want to add,

I think that's a really important point here, on
the -- on the -- how the dereg -- deregulation has
impacted the service-quality standards.

I mean, in 2004, I believe Verizon, I'll have to double check, was fined \$70 million for not keeping up with the requirements of the time.

And then, in 2005, the penalties and fees were taken away, due to Comp 3 of the PSC proceedings.

So, I think, you know, those -- those service-quality standards that were in existence a few decades ago, are no longer here.

So, yeah, it's taking a long time to get those repairs done.

ASSEMBLY MEMBER SALKA: And we're going to make all these high-level decisions, and all this money tossed around. And when the rubber hits the road, and you got to have the guys that are actually

doing the physical work, if you don't have them, 1 nothing can be implemented. 2 REBECCA MILLER: Yeah. And --3 ASSEMBLY MEMBER SALKA: So thank you. 4 REBECCA MILLER: -- if they're not required 5 6 to do it, it might be more difficult. ASSEMBLY MEMBER SALKA: Thank you. 7 OFF-CAMERA SPEAKER: That's a good point. 8 9 SENATOR MAY: All right, thanks. 10 Senator Metzger. 11 SENATOR METZGER: First of all, thank you so 12 much for your testimony. 13 And I appreciate that you brought up the 5G 14 issue because, for rural areas, that's not going to 15 be a solution, and that fixed broadband investment 16 is so important. 17 I also appreciate that you brought up the 18 importance of labor protections. And I think Phase 4 of that, we'll be 19 20 considering, needs to make provisions for that. 21 I'm curious to see what you see is standing 22 in the way of reinstating the service-quality standards? 23 24 REBECCA MILLER: I mean, that is the

jurisdiction of, not me, and not CWA.

25

I think, you know, increasing those -
increasing the ways that we can put pressure on the

different companies to provide these services to

consumers is something that we certainly would be in

But that is certainly more of a legislative on the state level.

And then, of course, as we've discussed before, there are preemption issues.

But I think --

favor of.

SENATOR METZGER: I guess my question is really sort of the interplay of the federal and state, and whether, you know, there's an obstacle at the federal level to that?

REBECCA MILLER: The action that was taken, that I just referred to, in the early 2000s, and that was part of a process that I believe started with the PSC in the early 1990s, was a state-level action.

SENATOR METZGER: Because we can also see the parallel in the utility, in the electricity industry, deregulation has not given the promised benefits.

So, you know, it's a very similar situation.

25 REBECCA MILLER: Exactly.

1 SENATOR MAY: I guess we have no more 2 questions. 3 Thank you very much for your testimony. REBECCA MILLER: Thank you, all. 4 5 CHRISTOPHER RYAN: Thank you; thank you very 6 much. 7 SENATOR MAY: Good to see you both. SENATOR MAY: And coming up, 8 Gretchen Hanchett. 9 10 GRETCHEN HANCHETT: I think my testimony 11 started out, "Good morning," but I will say: 12 Good afternoon, Senator May, 13 Assemblyman Santabarbara, Senators and Members of 14 the Assembly. It's a pleasure to be here, and it's my first 15 16 opportunity to come before you in a hearing. 17 And almost, literally, everything that I have 18 in my testimony has been covered, with a few 19 exceptions. 20 So as a matter of time, I will try to 21 summarize, but I practiced it, reading it over and 22 over again. So, I'll do my best. 23 Allegany County, I'm not sure if you know 24 where Allegany County is, but it is a very rural

area. We have, approximately, a population of

25

48,000 in the whole county.

Tourism is growing, but our biggest part of our tourism spending for Allegany County is second homes; the camps, the houses on our two lakes there.

And we need to be able to have broadband in order to grow.

Our manufacturers are continually leaving our area, as they are in many areas in the state. So we look for other ways to start growing.

Entrepreneurship, working at home, many businesses now are paying their workers to work at home. It's cost-effective for them, and it's certainly a way to have people live in a beautiful, quiet, serene area, and where they want to live, and be able to be connected to the world.

Allegany County is a gorgeous rural county nestled under our canopy of huge number beautiful trees.

Sometimes that's a blessing; with Internet, it is not.

We believe our location is ideal for access to natural resources, clean water, and outdoor recreation, but, at the same time, being close to interstate, rail transportation, and easy access to airports.

We also believe high-speed Internet service is no longer a luxury, as we've heard over and over again this morning. In the twenty-first century, it is a necessity.

Unfortunately, in rural Western New York, there remains significant areas where it is only a dream, or perhaps a promise, but certainly not a reality.

Internet service across our nation and state predominantly provided by a very few large companies, that, understandably, have responsibility to the equity holders to maintain acceptable return on investment; thus, we run into those problems of expanding.

The consequences of the situation also means that sparsely populated areas, much like Allegany County, are not as high of a priority as more densely populated areas.

Companies such as Spectrum, Verizon, AT&T, Frontier Telephone, continue to invest in technology needed to provide services mainly in areas that have higher population density, which we talked in great length about.

So let me see if I can scoot down a little bit.

And we certainly are appreciative of Governor Cuomo recognizing the need to bring broadband to New York State.

This program has provided great funding to support the deployment of high-speed Internet access to underserved areas throughout New York, providing substantial support to companies willing to make that investment in those lower density areas, including much of Allegany County.

And I did attach two maps.

This one right here shows Phase -- Round 2 and Round 3 for Armstrong, which was an awarding.

And they are the bright pink and the lighter pink.

And, unfortunately, I cut off the letters there.

The green is HughesNet.

What is -- it looks like we're pretty much covered, but in reality, this is HughesNet, and this is not broadband, and that's the majority of our county.

To try to simplify a very complex situation, using Armstrong's grant as an example, the

New York State Broadband Program Office provides

support for that company to build out to specific areas. And, again, we will go into the census block area.

That is an issue.

They may have two or three houses in a census block. Armstrong cannot provide that fiber in that area.

Our local SBCA raised millions of dollars and built a beautiful facility, and is -- takes in several different counties, the wire -- the fiber is being put on a pole, but they cannot hook it up to it. So...

SENATOR MAY: So I'm going to interrupt you because your time is up, but I have time to ask you for, what are your recommendations, what would you like to see us do?

GRETCHEN HANCHETT: Well, let's see.

That time went fast.

Some of our opportunities that we have:

Better mapping was brought up over and over again, so I don't need to go on to that.

Barrier to entry: Irrespectively of technology type or solution, there is always over arching obstacles associated with broadband deployment. And that is access to the poles.

In the case of fiber deployment, as previously stated, the permitting process, make-ready, has been very difficult.

1 We talked about wireless Internet.

Their solutions, for example, pioneering a joint program with wireless Internet services.

And our county started that program. They received \$5.6 million several years ago. And in the county, the program used emergency 911 towers that the County has erected to serve public-safety needs.

This permits the County to use the same infrastructure for two critical needs of the country residents and businesses.

The use of 911 towers and private wireless

Internet providers has extended high-speed Internet services to areas of the county that were previously underserved.

So I think we need to really look into those other solutions because there are places fiber will never make it. The population is just not large enough.

So I think there are currently multiple programs available at the federal, state, and local level.

Unfortunately, there doesn't seem to be a great deal of coordination or cooperation in these differenting (sic) levels of government.

And I think that needs to be addressed.

They should also encourage local innovation and experimentation to address unique local needs.

And I know that it was brought up about talking to the locals, going to local officials, because they really do know what the needs are and where we need the Internet.

Our rural area has many advantages and present unique opportunities.

Our rural citizens are entitled to enjoy these benefits while still receiving basic services.

As I said before, many of these subjects were covered over and over again, and I was trying to figure out how to cut all this out.

I'm glad you're all on the same page.

We appreciate you looking into it, and we really need to look at several different opportunities, because there's not just one answer in rural areas.

So, thank you.

SENATOR MAY: Thank you very much for your testimony.

Any other questions?

No?

All right. Thank you very much for your testimony.

David Wolff. 1 2 DAVID WOLFF: Yes, ma'am. SENATOR MAY: Great. 3 DAVID WOLFF: Good afternoon. 4 I would actually ask that I get the 5 6 8 minutes, because I want to talk to mapping, the 7 issue that has come up here. And I would like to point out the next steps 8 I think that we need to take to be able to get to 9 10 what I believe we should do, which is a Phase 4. 11 My name is Dave Wolff. I was born and raised 12 in Saranac Lake, New York. I've retired back to Saranac Lake after a 13 14 31-year career with IBM, IBM Consulting. I'm on the board of ADK Action. The details 15 16 about it --17 SENATOR MAY: I am going to interrupt you for a sec because there's a little feedback or 18 19 something. 20 If you can speak a little more slowly, 21 I think we'll understand you better. 22 Thanks. 23 DAVID WOLFF: Okay. Probably step back from this too. 24 I'm on the board of ADK Action. The details 25

about that organization are in the handout.

And I'm also the chair of their broadband committee.

I would like to challenge you all, and challenge the State of New York, I think the goal for broadband in the state of New York should be "100 at 100"; i.e., 100 percent of the homes should have access to broadband speeds of at least 100 megabits, or better.

I believe it's a public-policy issue.

It's not an issue about cost.

My grandfather's generation, if you will, did this with federal and state funding, to provide connection to electrical power.

My father's generation did it with phones.

I think it's time that we do in the state of New York, we connect every household with either fiber or coaxial cable.

Before I start and talk about the mapping issue, I need to at least talk about the definitions that we've thrown around, "unserved" and "underserved."

The State of New York's definition of "unserved," is anybody that has access to broadband speeds less than 25 meg.

If you're between 25 and 100, you are "underserved."

And you heard from Jeff Nordhaus earlier, that when the New New York State Broadband Program is completed, and the Spectrum 145,000-address network expansion is done, roughly, this time in 2021, there will be only 1 percent of New York State households that won't have access to 100 megabits.

The rest of my testimony, I want to talk to you today is: Okay, how do we identify that 1 percent?

If we are going to achieve the goal that I'm proposing, which is "100 at 100," we need to figure out who they are, where they are.

And that information is required before you can then turn around and say, what's it going cost to, in fact, bring fiber or coaxial cable to those folk?

And, by the way, you would like to know,

I think, you yourselves, as well as of the local

officials, to identify who those people are and

where they are, so when the next constituent calls

you and asks, you know, "When is my poor broadband

service going to get fixed?" you would have an

answer.

There are two categories of unserved and underserved.

And if you go to the handout, that, hopefully, you just got, on page 2 of the detailed charts, is a chart that shows the first category.

This is what we've been talking a lot about, which is, everybody that's been awarded a Spectrum -- excuse me, a HughesNet, my mistake, award.

What I'm showing you is a map of the state of New York.

Every census block awarded to HughesNet is highlighted in yellow. A fairly extensive portion of the state of New York is being given that service.

The good news is, everybody in those census blocks was unserved, by definition, before they got the HughesNet award.

HughesNet service, though, the bad news is, as we've been talking about, it's 25 megabits with a soft cap, which by definition means everybody is underserved.

That's the first category.

We know where they are, that's the good news.

The second -- if you go to page 3, the second

category of unserved or underserved is, I'll call it, "the elephant in the room."

And what I'm going to show you on these, the chart on page 3 and the chart on page  $4\ --$ 

SENATOR MAY: Let me ask you to lift that up a little higher so people -- other people can see it.

DAVID WOLFF: Sorry.

(Parties cross-talking)

SENATOR MAY: Yeah, there you go.

Perfect, thanks.

DAVID WOLFF: -- the elephant in the room on this one is, the -- this category are all the households that are outside, beyond the boundary, of the Spectrum networks in Spectrum rural franchises.

Spectrum's expanding their network by 145,000 households.

That -- you know, there's no way that is the total number of households in their franchises that don't have access to high-speed, 100 megabits.

So the question is: How do we identify the folks that are not being addressed?

And what we've done is, there's a GIS application, that Jim Monty referred to earlier, that we have developed, being used in the

North Country, that, this chart, and the next chart, will explain what's going on, which is to be used to help us identify the unserved and underserved households that are beyond the boundary of Spectrum, inside their rural franchises.

Starting on the left-hand side, it's -- what you're doing this is, this is a county level, showing Franklin County.

The center, as we layer a layer on top, that puts all the census blocks. They're State land.

By definition, you can't live in State land. So no census block that's green in the center is going to unserved or underserved.

On the right-hand side you see where we now layered in any provider that received monies from the State of New York under the New New York Broadband Program, per Jeff Nordhaus earlier.

Everybody in those census blocks must be addressed.

So what's left is, the blocks that are -the -- the -- if you will, areas, in this case,

Franklin County, that have no color, that's where we want to focus our attention.

Going to the next page, this is just a further example of how to use the map.

Starting on the left-hand side of

Franklin County, what we do is now drive down to a

3 local town.

I'm going to pick the town of Harrietstown, which is my town. It is a town that has a Spectrum franchise.

Driving down to my local neighborhood, 50 homes around Lake Kiwassa.

And on the right-hand side, what you see is, with the GIS capabilities, we have identified all 911 addresses in my neighborhood.

That is the universe of, if you will, the addresses that we have to make sure have acceptable Internet.

And what I'm going to do is, now use this information, this map, going to the next page, to show you how you might now identify the unserved, underserved, outside the boundaries of -- (hits microphone) -- excuse me, our local Spectrum network.

Since I know the neighborhood, I know where Spectrum's network ends.

They bring service to the north part of the lake and to the east part of the lake.

The two bronze ellipses are circling

addresses that have no Spectrum Internet. They're outside the boundaries of the Internet -- excuse me, of the service from Spectrum.

I've gone on the Spectrum URL that was talked about earlier. I have verified, two days ago, that every address in those ellipses is still unserved. It is not going to be addressed by their network build-out.

So when they're done in September of 2021, everybody inside those two bronze ellipses will be unserved. Okay?

The other way we're using this application is, the last chart, which I'll -- and I took a screenshot from the application, and I backed it up, if you will, so I have my local address, neighborhood, around the Lake Kiwassa, and I've now included parts of the neighboring village of Saranac Lake.

Again, you see the two bronze ellipses down in my neighborhood.

I happen to know, again, with local knowledge, the closest wire-line competitor to Spectrum's network is where you see the red X.

That's two miles -- over two miles from the nearest ellipse.

There's no way that that competitor, competitively, could provide service to those bronze ellipses better than Spectrum could.

My point here is, Spectrum is the only game in town.

And I'd point out that, basically, Spectrum has a de facto monopoly on the unserved and underserved in its rural franchises.

SENATOR MAY: Okay, I need to ask to you wrap up.

DAVID WOLFF: So, with the goal of "100 by 100," we need to identify the unserved and the underserved.

And what I'm recommending we do is, this GIS application I talked about, is -- I would recommend providing that application, taking it statewide.

The rough cost estimate to do that is in the order of a quarter of a million dollars. And we could do that for every town -- rural town in the state of New York.

The second piece I recommend is that you all request of the PSC to require Spectrum to publicly make available, where does their network end, by street, by town, in aggregate, across the state?

I'm not asking for their customer subscriber

information.

I just want to know where the network ends, so now local officials, people like myself, can sit down and figure out who's beyond that border, and identify the households that will continue to fall through the cracks, as it were.

SENATOR MAY: Okay.

DAVID WOLFF: And so the only way --

SENATOR MAY: I --

DAVID WOLFF: -- we can achieve, if you -- the goal I'm talking about is "100 by 100," is to get this information. Then you can turn around and figure out, what's going to cost?

And, hopefully, then, at that point, come back to you all and say, we're going to have to raise the money somehow.

But if New York does achieve "100 by 100," it will now be addressing one of the key limitations to economic development in rural parts of New York State.

Thank you.

SENATOR MAY: Okay, thank you.

So I'm going to come back to a question that I asked our first witnesses.

Just -- I mean, if you have somebody who

decides they want to live off the grid; they build a 1 cabin way, way, way out of -- you know, off the 2 grid, literally, and then they decide, oh, well, 3 I want to have a home office here, and I need to get 4 on the grid, I think it's legitimate to ask: Is 5 6 that -- should that -- should the taxpayers be 7 footing the bill to connect people who are very far away from the grid? 8 I imagine in the Adirondacks there are quite 9 a few circumstances --10 11 DAVID WOLFF: I think it's a fundamental 12 question about policy. 13 Is it a public good, like electrical power, 14 like phone access, or, is it an issue of cost 15 benefit? 16 I believe it's a public good. I believe the future economic welfare of the 17 state of New York would require everybody in the 18 state to have "100 at 100." 19 20 SENATOR MAY: Okay, thank you. 21 Other questions? 22 ASSEMBLYMAN SANTABARBARA: Assemblyman Jones. 23 ASSEMBLY MEMBER JONES: Thank you. 24 Thanks, Dave, coming down, and thank you for

all your work that you've done on this.

25

We've had many conversations about this, and you have -- you've gone leaps and bounds to get this information for us.

So what you're saying is, essentially, even if --

And -- and I -- and I kind of shudder to look at this map that you provided. And we have a lot of coverage in the Adirondacks and the North Country provided by satellite service.

-- even if that coverage was grade A, let's say, for example, we're still saying we can't -- under your method, many parts of New York State, we cannot identify what the unserved areas are?

DAVID WOLFF: (Parties cross-talking) --

ASSEMBLY MEMBER JONES: We can, but we haven't.

Even if that coverage is good, even if the

Time Warner coverage is -- is -- is -- is everywhere

they say it is, we're still at a shortfall in -- in

providing some -- some areas?

DAVID WOLFF: The -- the New York State -- New New York State Broadband Program, and it kind of split the state with Spectrum. And as part of the merger agreement, Spectrum then said they would go out to 145,000.

So the New New York State Broadband Program, we know exactly where they are. And they are requiring all providers to touch everybody in a census block.

That leaves us back over here with Spectrum, and saying, after the 145,000 network build-out from Spectrum, there will be an unknown number of households outside the limits of their -- the -- their end points of their network that still will not have access to -- to broadband.

And we need to identify those.

ASSEMBLY MEMBER JONES: And what Mr. Monty said before was, we don't know what we don't know.

DAVID WOLFF: That's it, we don't know (parties cross-talking) --

ASSEMBLY MEMBER JONES: He said it a little more eloquently than I did, but (parties cross-talking) --

DAVID WOLFF: -- we don't know -- we don't know (parties cross-talking) --

ASSEMBLY MEMBER JONES: -- how do we know where we are with that until they say they're done?

DAVID WOLFF: And that's why I'm suggesting that we go to the local level with the data, literally, at the 911 address level, with local

people that know what's going on in their town, to 1 identify, by address, who's at risk. 2 OFF-CAMERA SPEAKER: Absolutely. 3 ASSEMBLY MEMBER JONES: Sure. I agree, 4 5 totally. Thank you again. 6 7 I will -- I do want to make the point for the North Country in my district. 8 In particular, I live in a geographically 9 10 diverse area. 11 A lot of the Adirondacks there, a lot of 12 valleys, a lot of flat farmland, that also always is -- is -- is being underserved or unserved right 13 14 now. 15 But, when we get down to it, the solution 16 that -- that -- that you had said is hard wire everyplace in -- in -- in New York State. 17 Is there any other technologies out there, 18 19 besides satellite, which we've all agreed here, 20 I think, on the panel, is not serving our 21 constituents as well as it should be? 22 Is there any other technologies out there

> And I say this because, maybe we won't get to that goal of hard-wiring everyone.

23

24

25

that we can use?

What are the other -- other technologies? 1 DAVID WOLFF: The -- the -- what of interest 2 to me is the low-level satellite solutions, which 3 I think there are four companies that have been 4 5 approved to try and pursue that technology, in which 6 case, you're bringing the satellites down much 7 closer to the earth. The problem is, you need a lot more 8 satellites. 9 And then you have issues about how you trade 10 11 off calls and stuff as the satellite moves around. 12 But as the satellite gets closer, your 13 bandwidth speeds can go up and your latency period 14 goes down. 15 But that is, how many years in the future? 16 ASSEMBLY MEMBER JONES: Yeah. 17 DAVID WOLFF: Don't know. 18 ASSEMBLY MEMBER JONES: Okay. Thank you. SENATOR MAY: Thank you. 19 20 DAVID WOLFF: Thank you very much. 21 SENATOR MAY: So next we have three CEOs of 22 electric cooperatives.

I will say, after them, there are still

11 people to -- 11 witnesses on our list.

23

24

25

So, we're really going try to keep it to the

```
1
        5 minutes, to the extent that we possibly can.
               TIM JOHNSON: 5 minutes each?
 2
               SENATOR MAY: That would be...
 3
               TIM JOHNSON: Nice try.
 4
               SENATOR MAY: You think we can do 10 minutes
 5
6
        for all three of you?
7
               TIM JOHNSON: We hope so.
               We've been redacting and crossing out --
8
9
               SENATOR MAY: Okay, good.
10
               TIM JOHNSON: -- since you started saying
11
        this.
12
               SENATOR MAY: Let's set it at 10 minutes,
               Thanks.
13
        then.
14
               TIM JOHNSON: Okay?
15
               SENATOR MAY: Yep.
16
               TIM JOHNSON: So I am -- is this working
17
        okay?
               SENATOR MAY: Yes.
18
19
               TIM JOHNSON: I'm Tim Johnson. I am the CEO
20
        of Otsego Electric Cooperative in the Cooperstown,
21
        New York, area.
               Bryan Dillon and Keith Pitman are with me.
22
23
               We are New York State Rural Electric
24
        Cooperative Association members.
25
               There's only four co-ops that are represented
```

by the association.

The other one is not here. He is in -- they are in Senator Metzger's district, and they are -- have participated in the New York Broadband Program in the form of a partnership with local telcos.

Otsego Electric did not have that option. We did not have local telcos that were stepping in the gap to provide this service.

So we -- although we were an electric cooperative providing service to about 4500 metered locations, we felt that we needed to step forward, and we applied for, and received, \$10 million of New York State funding, and 4 million additional from federal CAF funds, to build out a fiber network.

With that, we also get the benefit of increasing our smart-grid capabilities to position us for the future.

So we feel it's a twofold benefit, and the other benefit is underestimated, in my opinion, greatly.

We plan to make gigabit service -- we are already making gigabit service available at very fair prices, with no data caps, of course.

This is a fiber-to-the-home project.

We've built over 600 miles of fiber to this point, and -- with only 525 miles that we're grant-eligible.

So our cooperative has undertaken quite a bit of capital investment, in the form of debt, to make this available to 100 percent of our members. That would involve more than 5,000 locations.

We've also taken on, as part of the bid process, about another 1,000 locations that are in the New York State electric and gas service territory.

So let me jump ahead to what we see as some of the public-policy issues.

Mapping has been mentioned by many.

Funding, obviously, is the other one.

The driver for all of this is money.

Make-ready costs:

We know, and have a very firm grasp, on what the construction costs are.

But make-ready is a blank check that we sign up for when we apply for permission to attach to investor-owned utilities outside of our network.

Within our network, absolutely no problem.

Outside of our network, this is a very big issue, even just the application fees and the

initial stages to find out how much your eventual make-ready might be.

And, quite honestly, make-ready costs, including pole replacements, may double the cost per mile to build out.

So that cannot be underestimated.

The mapping issue that was discussed this morning, that we see pockets, or islands, of properties that are unserved.

And although we may qualify for financing out to a census-block boundary, the last household might be a mile away.

So the next guy who's like a half mile into the unawarded area, is a mile and a half.

So we're talking tens and tens of thousands of dollars to get to that last-mile customer.

We would love to get to them, but we can't do that purely on debt financing. There isn't a rate of return available for that.

So public funding is critical for that.

I haven't heard anybody mention crowd sourcing as an easily accessible process to identify parcels that need to be flagged.

And, also, we need an easily accessible challenge process. And maybe this is at the federal

level, at the FCC, but, something that needs to be addressed as well.

We feel that the rural-development opportunities funds may provided some opportunities.

I doubt that it will be very much for New York State. At the federal level that could be \$20 billion.

I don't know how much might come to New York.

It's possible, but I'm not sure that it will be very much money.

We think that gigabit-fiber-to-the-home project should be given preference over less robust technologies, such as fixed wireless and/or DSL and/or cable.

SENATOR MAY: I'm just going to interrupt.

Are you going to take the whole 10 minutes?

Or do you --

TIM JOHNSON: How much have I taken already?

SENATOR MAY: 5 minutes already.

TIM JOHNSON: Oh, okay. Thanks.

Let me skip to one other major topic, which has just arisen, and that is local jurisdictional taxation.

We have been notified that our fiber assets are going to be assessed locally by a municipality,

and that will cut into our ability to expand in the future by, we estimate, at least 25 percent, based on the experience that we've seen locally.

So we need clarification.

And, I'll defer to my partners.

SENATOR MAY: Okay.

BRYAN DILLON: All right.

As Tim mentioned, my name is Bryan Dillon.

I'm the general manager for Steuben Rural Electric located in Bath, New York.

I'll skip ahead to some topics that haven't been covered.

We at Steuben Rural Electric have been working closely with telecommunication companies to make our infrastructure available.

We're doing this with as few barriers to entry as possible, and as safely as possible.

Between all phases of the New York State

Broadband Program, approximately 3,000 of our

underserved or unserved members will now have access
to high-speed Internet.

Again, satellite was awarded for a large portion, but we've covered that in great detail today, so I won't go into that.

Another concern that we have is, many of you

are aware, is a condition of Charter's settlement agreement.

They were required to expand their footprint in rural territories.

As such, we've received numerous pole-attachment applications which seem to overlap geographic regions covered by the New York State Broadband Program funding.

This appears to be counterproductive to the goal of expanding broadband in rural communities.

They have since withdrawn a lot of their applications, and have not submitted any further applications to date.

Regardless of future plans, we feel that it would be sensible to require that Charter build out to locations that are unserved or covered by satellite service.

At the very least, we feel that consideration should be given for these overlapping coverage areas, and should not count towards Charter's obligation to serve rural communities.

We're aware that this concern is being addressed, to some extent, but we hope that it continues to be monitored, to pursue the most efficient expansion of broadband coverage.

SENATOR MAY: Thank you.

KEITH PITMAN: Good afternoon. I'm

Keith Pitman from Oneida-Madison Rural Electric

Cooperative in Bouckville, New York.

With my two minutes here, I'd just like to share a little bit about our area.

Our experience resembles much of what we've heard about today.

We have certain areas that are multiple served with broadband, multiple providers, exceptional situation.

We have folks just starting to see things happen, thanks to the rural broadband programs, and so forth.

Then we have some areas where people are hopeless and desperate, which I think are the folks you hear from regularly. They'll be, like, We're never going to see anything happen here.

So one of the challenges I would recommend is that folks take a look at things like the cooperative-owned business model.

75 years ago, people didn't have power in our area -- same situation -- and, eventually, money was made available.

It takes money, as Mr. Johnson said.

You're not going to get past the 25, or get fiber to the home, without money.

But the challenge would be: How does that money get spent? Who does it allocated to? And how can it best work at the local level?

And would I argue that it's not the same everywhere.

People know in their neighborhoods where they need things.

And so things can be done at the local level, at the municipal level, at the electric cooperative level.

So I would encourage that there be paths for folks to take local control.

Electric cooperatives have subscribed to that theory for 75 years. Went from desperate folks, to, today, in New York, the electric cooperative memberships are some of the best-served and happiest consumers of electricity in this state.

So I would just mention that that's kind of a forgotten business model.

But if you look around the countryside, I'm actively involved with the National Electric Cooperative Association, as well as the Northeast Electric Cooperative Association.

There's plenty of success stories and efforts being made to approach.

Rather than sending money to large profit-seeking out-of-town agencies, to direct more of the money and resources to local non-profit mentality, such as what's going on at Otsego Co-Op, which I think is a shining example of a great use of money over there for the local benefit.

Thank you.

SENATOR MAY: All right, thank you. You guys did a good job.

ASSEMBLYMAN SANTABARBARA: (Microphone off.)

Just a -- thank you for -- thank you for your -- is this working?

(Microphone on.)

Thank you for your testimony.

There's a couple -- couple of things I want to comment on.

The overlapping areas, I agree with you, that is an issue that we do need to look into.

And I think that's something this Commission should look into, is -- is -- is Charter receiving credit for areas that are already covered? And should -- should they focus their efforts also where -- I think that's a very good point.

I made note of that, and I -- we will add that to our list of -- long list of things that we need to follow up on.

And as far as challenging, you know, the maps, and the process for that, I know the FCC, as I said in my opening statement, and I think in some of the other comments, that they did issue an order to fine-tune these maps, not use the census blocks, use the shapefiles.

But in addition to that, they also are creating, I don't know if it's available yet, or will be available at some point, the -- an online portal that's available to State, us here, but also local entities, to be able to challenge those areas.

And, hopefully, that will give us some better information as to the properties and the communities in the areas that we're talking about, because, yeah, there's areas that are missed.

And then, you know, the other issue you mentioned is affordability.

You know, how much is it going to cost if we do need to get to these remote areas, or a property that's -- that's maybe a few miles out? You know, can we get it there?

And then, if it's not affordable, then, you

1 know, what's -- how -- you know, that sort of defeats the purpose of even -- even getting service 2 out there if nobody can afford it. 3 So I just wanted to make mention of those --4 of those items. 5 I appreciate your testimony, and thank you 6 7 for being here. 8 TIM JOHNSON: Thank you. 9 SENATOR MAY: Yeah, thank you. 10 Senator O'Mara? 11 SENATOR O'MARA: Uh, yes. 12 Thank you all for being here. 13 I applaud you for the efforts that do you in 14 your rural communities in providing low-cost 15 electricity. 16 So I do appreciate that. 17 I have one question, to Mr. Dillon, since 18 you're from the district I represent, so I'll target 19 you. 20 [Laughter.] 21 SENATOR O'MARA: In your written remarks, at 22 the bottom of the first page, you said that, "Time 23 constraints set forth impose a significant 24 challenge."

What can -- can you expound on that a little

bit, on -- on what's -- what kind of time
constraints you have that you're dealing with?

BRYAN DILLON: Yeah. The -- the Broadband Program Office set forth time con -- time constraints for the funding, that has been quite challenging because, in our particular instance, systemwide, we have about 23,000 poles. We had to go out and inspect and -- about half of those; so about half of our infrastructure, in a very short time frame.

But, you know, we -- we're a very small organization. We have 30 employees company-wide. We scaled up and we're -- we're able to meet the deadlines that were set forth, but it has been quite a challenge.

So -- but it's -- it's very important.

SENATOR O'MARA: Now, for any Internet companies that are utilizing your poles --

And this could be answered by any of the three of you.

-- are you actually setting those -- those yourselves, or are you allowing the other company to just access your poles?

BRYAN DILLON: In our case, we're actually contracting that out ourselves, to control the

process, and make sure it moves at a fast pace, 1 because we've -- we've heard a clear message from 2 3 our membership that the expansion needs to happen in a timely manner. 4 5 So, we're scaling up to address that. In Otsego, since we're building 6 TIM JOHNSON: 7

our own project, we did our own pole-setting, internally.

SENATOR O'MARA: Okay.

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

TIM JOHNSON: We've contracted out for one set.

In Phase 3 we've seen a significant ramp up in make-ready costs, because of particular engineering standards on delta-type systems, which is unfortunate.

We're replacing 140 -- out of 147 poles, we're replacing 47, for instance. So that's a pretty high rate of pole replacement.

In some cases we need 2 feet to attach to a pole sometimes. And we're being asked to replace a 35-foot with a 50-foot or 55-foot pole, which makes very little public-policy sense.

Privately, it makes a lot of sense.

SENATOR O'MARA: Uh-huh.

Thank you.

1 ASSEMBLYMAN SANTABARBARA: Assemblywoman
2 Woerner.
3 ASSEMBLY MEMBER WOERNER: Thank you.
4 Thank you very much.

I'm very intrigued about the rural electric cooperative model, and how it could be expanded to -- to address broadband.

So is it your recommendation, that one of the things we might do is create a section of law that establishes rural broadband cooperatives modeled on the rural electric cooperatives' model?

There's only four rural electric cooperatives in New York State, and you're all, pretty much, centered in one part of the state.

The rest of us didn't get on the bandwagon.

So are -- is that your -- is that -- am I -- is that the your recommendation?

TIM JOHNSON: I -- I mean, and this is something that I have not contemplated at all, but my reaction is, that we're non-profit, tax-exempt organizations; however, we do pay local property taxes.

But we feel that, as a member-owned, democratically-controlled organization, that we're ideally suited to conducting electric distribution

facilities and/or broadband, and many other types of services.

KEITH PITMAN: I would add to that, yes.

I think that business model is well proven in the realm of electric utility.

And as folks here have mentioned today, broadband is becoming more like a utility -- right? -- isn't it a necessity?

So, not saying rural electrification, rural broadband, is the only answer, but it certainly provides a yardstick or a standard of competition, a standard of -- another way of doing something that sometimes proves educational in the broader field.

So I think it's something that makes a lot of sense to at least contemplate how that would -- another way of getting the result that may be desired.

ASSEMBLY MEMBER WOERNER: Uh-huh.

And so with -- following that thought process, if we were to recommend a Round 4, or -- and/or -- or Phase 4 or Phase 5 investment, would it make sense to condition that, the rural electric cooperatives, and if there were rural broadband cooperatives, that they be given some sort of priority in the build-out, because they're doing

1 fiber to the -- because you're doing fiber to the 2 home? 3 TIM JOHNSON: We wouldn't be opposed to that. [Laughter.] 4 ASSEMBLY MEMBER WOERNER: I didn't think so. 5 But that's sort of where we're headed --6 7 right? -- is to say, these are -- these are locally-controlled entities that are in tune with 8 the needs of a -- of local communities. 9 10 You're prepared to make the investment to --11 to deliver fiber to the home, because you don't have 12 the same profit-and-loss issues that the larger 13 companies are. 14 So, therefore, if our goal is to get to --15 whose -- with "100 by 100," that -- that giving 16 preference to locally-controlled not-for-profit 17 entities is a better use of the money to -- to 18 achieve that goal? 19 KEITH PITMAN: I would say that, the minute 20 you take profit out of the equation, you freed up 21 more money for achieving your goal. 22 OFF-CAMERA SPEAKER: Right. ASSEMBLY MEMBER WOERNER: Great. Thank you 23 24 very much. 25 SENATOR MAY: Senator Seward.

1 SENATOR SEWARD: Yeah. 2 Thank you. First off, I just want to say thank you to 3 our electric co-ops represented who are here today, 4 as well as the Delaware County who was not able to 5 6 be here today. 7 Back in the '30s, I guess it was, the electric co-ops were instrumental in bringing 8 9 electricity to rural areas. And here we are, in this day and age, 10 11 you're -- you're very, very helpful in delivering 12 high-speed broadband in our rural areas. 13 And for that I want to thank you. 14 I did -- since Tim Johnson is from my 15 district, I want to ask him a question, and perhaps 16 all of you could also answer as well. 17 But, you had mentioned, and, of course, we're very familiar, you and I have talked many times, 18 19 about, you know, your build-out in Otsego County. 20 And you even went beyond what the broadband 21 dollars provided --22 TIM JOHNSON: Over 100 miles, yeah. 23 Uh-huh. 24 SENATOR SEWARD: Right. 25 -- utilizing, as you say, borrowing funds.

TIM JOHNSON: Borrowed capital.

SENATOR SEWARD: Right.

Now, my question is -- and we've talked a little bit about whether or not we should be coming in with, you know, maybe a Phase 4 or 5, in terms of additional broadband money.

But my question is: The remaining unserved households that you're familiar with, that you just couldn't get to, are they, shall I say, lower-hanging fruit, I mean, it wouldn't be that expensive if there was funding available?

Or are we down to those prohibitively expensive households that --

TIM JOHNSON: There are still prohibitively expensive households out there, where somebody has maybe had the second thought, thinking, oh, gosh, now I'm out here. It really would be nice to be connected.

And they initially wanted to be off the grid.

We've provided electric service to people of

that nature as well.

They share the expense. We ask for a private contribution.

And that may be a solution. It's worked well for cooperatives across the nation. It hasn't been

entirely publicly-financed. Sometimes privately.

But, yeah, there's some low-hanging fruit out there. There's quite a bit.

I have an example of a map, where -- I mean, you know, we're all the way around it, but we're a mile and a half from this one farm. They want service. They have used satellite available to them.

We would probably be able to get to them.

It involves about 15 electric poles outside of our system, so, you know, just the application fees alone to get on those poles is, you know -- you know, \$5,000 or so.

I forget the number.

6,000, maybe.

So that can be prohibitive just by itself.

So, yeah, any amount of money in Phase 4 would get us much closer. I think we'd be able to close a lot of the gaps.

There may still be gaps, especially in the Adirondacks. There's some real low sparsity out there.

And where it's sparse, the business model starts to really fall apart.

SENATOR SEWARD: Thank you.

KEITH PITMAN: I would add to that a little 1 2 bit, too, that the cooperatives are well positioned to deal with those local issues because, as we heard 3 earlier, about a place where there was a chance to 4 5 grow jobs, and so forth. Well, with local control, local ownerships, 6 7 as Mr. Johnson described, there may be those in-between cases where it can be partially funded by 8 the consumer and the cooperative or the local entity 9 provider. 10 11 So I think there's good opportunity there to 12 maximize the use of money once again. 13 OFF-CAMERA SPEAKER: There is. 14 SENATOR SEWARD: Thank you. 15 SENATOR MAY: All right. Thank you very 16 much. 17 I appreciate it. TIM JOHNSON: Thank you. 18 19 BRYAN DILLON: Thank you. 20 KEITH PITMAN: Thanks for having us. 21 SENATOR MAY: We have David Berman from 22 Connect Columbia. 23 OFF-CAMERA SPEAKER: Nope, Cornell. OFF-CAMERA SPEAKER: Cornell. 24

SENATOR MAY: Oh -- or, I'm sorry.

Dr. Schmit, from Cornell.

DR. TODD SCHMIT: Good afternoon.

Before I begin my testimony, I want to thank the scheduler for putting me back -- putting me right after the rural electric co-ops.

That will become evident in about two minutes.

Good afternoon.

My name is Todd Schmit. I am an associate professor and agricultural economist in the Charles H. Dyson School of Applied Economics and Management, a unit in Cornell's College of Ag and Life Sciences and the SC Johnson College of Business.

Thanks for holding this public hearing about the status of rural broadband in New York, and to identify methods to encourage its expansion.

My team at Cornell conducts applied research and extension programming in the area of agribusiness development, with a particular focus on implications for rural economies.

As part of our portfolio, we examine cooperatively-structured businesses and opportunities for new cooperative development.

It is in this area that I come to you today

to speak about research I'm involved in regarding the financial feasibility and potential for rural broadband cooperatives owned and governed by local rural residents.

As you know, traditional Internet providers are less likely to offer high-speed Internet to lesser populated rural areas, as the returns on investment are insufficient.

Rural residents faced a similar situation in the 1930s regarding electricity and telephone services, and many utility cooperatives were formed across the country.

Access was deemed a necessity for economic development, and as a means to recover from the economic downturn of the Great Depression.

Many of those original cooperatives are still in existence today.

With respect to real broadband, a number of federal programs have provided grants, loans, loan guarantees, to expand broadband access to the rural areas, and state and local governments continue to patronize and support its expansion.

In particular to New York, as was mentioned earlier, the New New York Broadband Program provides financial assistance. Applicants must agree on

cost-share provisions and offer a "minimum speed, maximum price" option to improve access to all residents.

My team investigated the financial feasibility to expand high-speed fiber to unserved and underserved areas in five rural townships in Franklin County.

We considered the start-up of a new cooperative and for an existing cooperative utility to expand into broadband services.

The areas characterized by low population and housing densities, full-year residences, and many seasonal and recreational residences, some rustic and designed for seasonal use, while others are single-family homes that could be used year-round.

We considered two -- a two-tiered monthly-service pricing structure for members: one price for high-speed users, and another price for lower-speed users.

Initial market prices were based on existing prices near the study area, and consistent with the New New York Broadband Program for a "minimum speed, maximum price" offering.

The New York Broadband Program funds up to 80 percent of project costs through a grant, with

the remaining 20 percent sourced from other funders.

Funding from commercial lending sources is often necessary to capitalize businesses fully, and where lenders often require business owners, in this case, the member-owner users, to invest.

In our analysis, capital construction costs were covered 80 percent by the grant, 10 percent by a term loan, and 10 percent by member investment distributed equally among all household members.

Under the new cooperative scenario and using prevailing market prices in the study area, operating expenses for the cooperative exceeded total sales in each year, resulting in a negative cumulative cash flow of nearly \$6 1/2 million over the 10 years.

Even under the cooperative expansion scenario, where some expenses on existing fixed assets -- poles, equipment, workers -- were reduced, the cumulative cash flow was still negative.

Importantly, the high degree of financial infeasibility at market prices was not due to burdensome capital-loan servicing requirements.

Okay?

90 percent of the capital costs were covered by a grant and member investment.

In other words, financial infeasibility had 1 less to do with the up-front capital-investment cost 2 3 for these systems than the annual operation and maintenance costs required to sustain them long 4 5 term. SENATOR MAY: So, Dr. Schmit, your time is 6 7 up, but I'm going to use my time to ask you: What are your conclusions, and what are the policy 8 9 implications (parties cross-talking) --DR. TODD SCHMIT: 10 Okay. 11 Sorry. I thought I had 10 minutes. 12 Uhm, so let me jump to my conclusions. 13 SENATOR MAY: Okay, thank you. 14 DR. TODD SCHMIT: Numerous concerns exist 15 about the long-term impact to the study area. 16 They've been mentioned today. 17 Tourism is an important driver. 18 People visiting the area, seasonal-use 19 property owners, expect long-term broadband. 20 Without it, you can expect lower stays; 21 ultimately, lower property values.

When a minimum return on investment is replaced with meeting member needs, the advantage of a cooperative venture is clear.

22

23

24

25

You just heard from the colleagues before me.

However, the willingness and ability of members to pay relatively larger user prices remains an open question and deserves community input.

Our other pricing scenarios indicated, for an existing cooperative venture, the price premium above market prices is actually quite low, and consistent with broadband expansion coming from rural telecoms and some rural electrics in the United States.

However, we need to consider fully the other public benefits that you mentioned, in terms of education, public safety, and business expansion.

The case was made for electricity and telephone services in the 1930s, and similar arguments hold for this technology today.

We can compute what those numbers are, we can compute what the premiums are, we can talk about what parameters would be necessary, under potential public-private partnerships.

Thank you.

SENATOR MAY: Thank you.

Question?

ASSEMBLYMAN SANTABARBARA: Just -- the sustainability costs just to maintain the lines, you briefly mentioned it.

How does that compare over time? 1 2 Does that just compare to the capital costs? 3 DR. TODD SCHMIT: Yeah, we had an up-front capital cost for this system. It served about 4 1,000 users in those -- in those rural towns. 5 That was about \$8.3 million, I believe, operation. 6 7 Maintenance and repair costs are about 300. The other top three were -- in this case, 8 9 there are no electric utility co-ops there. The next three after maintenance and repair 10 11 were pole rental, at about a quarter of a million a 12 year; property insurance; and property taxes. 13 ASSEMBLYMAN SANTABARBARA: Thank you. 14 SENATOR MAY: Thank you. 15 DR. TODD SCHMIT: Thanks. 16 SENATOR MAY: So next we have David Berman. 17 And I'm going to ask Annabel Felton to come up at the same time, just because some of the 18 19 questions may be similar questions. But you'll each 20 get five minutes to -- for your testimony. 21 And we'll start with you, Mr. Berman. 22 DAVID BERMAN: Okay. 23 I'm going to zip through this. Being an old 24 TV guy, we're going to do the highlights of every

25

page.

Thank you for having me.

I represent Connect Columbia. It's a citizens' action group comprised of both elected officials and citizens.

We have labored long and hard over the last few years, and with the outstanding help of our Assembly member, Didi Barrett, succeeded in getting some \$30 million from the Broadband Program Office.

I am one of the few insomniacs who has read the -- the PSC merger agreement multiple times.

We were thrilled to see that legacy Charter would be upgraded in Columbia County over the objections of the Time Warner-Charter management.

Because I am a suspicious sort, I had every town in Columbia County that had a franchise agreement exercise their right in their franchise agreement to request and obtain an as-built map.

You will note, nowadays, Spectrum will not provide a detailed as-built map.

So I actually know where they were in each of those towns.

So, first of all, if you take what the Broadband Program Office did, and said --

Forget their statistics, I don't know where they came from.

1 -- I would say that, in the town of Ghent where I am from, and in most of Columbia County, 2 that you would have, probably, 75 percent of the 3 population having access to broadband, but somewhere 4 between 50 and 60 percent of the geography, because 5 6 what we've all failed to address here is geography. 7 Secondly, when it comes to people saying, "I'm legacy Charter," you call Charter and they will 8 9 tell you, no, you're not. But for \$20,000, we will 10 do that. 11 I then take a picture of the as-built map and 12 say, Your line's across the street. Let's knock it 13 off. 14 I have saved innumerable amounts of money for 15 people. 16 I wouldn't say they are out to defraud the 17

consumer.

I would say they are blazing incompetent most of the time.

I'm not -- I'm the snarky one, you see.

[Laughter.]

18

19

20

21

22

23

24

25

DAVID BERMAN: Moving on to the others, and just a final thought on Charter:

One of the provisions in that merger agreement was an improvement in customer service. Now, it was also benchmarked by "comparable to other cable companies."

And, boy, everybody knows, nobody likes their cable company.

Looking at the other small operators that took money in Columbia County: Consolidated, formerly FairPoint; GTel; and Mid-Hudson Cable, all got substantial money.

One of the issues we had was an overlap, because much of legacy Charter were considered franchise areas.

This is all in the document if you want to read it.

So, for instance, I went from a 6/1 DSL line to a choice between Spectrum and Consolidated's fiber to the home.

I go to the street behind me, which was a BPO award to Consolidated, where the census block goes down the middle of the road, and, therefore, people on that side of the road don't have service. People on this side of the road, some of them do because, while people are supposed to provide service for everyone in the census block, they do not.

So, that brings me to where I'm at with my wonderful Assembly member, Didi Barrett, who has --

with our prodding and poking, and her excellent work, we have requested that we get beyond this war between BPO and the PSC, and have Mr. DiNapoli do what he does so well, which is an audit, so that we 4 actually know, where they have installed, where they were supposed to install, where they got paid to install, where they should be fined for not installing.

> And then use that as the real map of where we should be, where we aren't.

> > Lastly on that issue:

1

2

3

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

Get rid of census blocks;

Don't use 911, because I can tell you there's probably 10 percent in my town who are not on the 911 map;

And go to the ultimate gold standard which is the tax rolls.

Because now you have something that you can physically address and walk up to.

And before I just get to my last point, people, look up; look up at every pole.

On the top is electricity.

Next step down is probably old-style copper telephone.

If you see thick black cable, that's fiber,

it's there.

Make people pay attention to it.

SENATOR MAY: All right.

DR. TODD SCHMIT: And on that note of -of -- with Spectrum's non-disclosure agreement with
Public Service Commission, forcing an audit would
give you public disclosure. Getting the results of
an audit that would be made public would be just an
amazingly wonderful thing.

Let's get past 100 service. We're way behind the times, we need gigabit service.

I will be there quickly.

And you should learn one last acronym, which is IOT (the Internet of things).

Everything needs to be connected.

There are huge programs in third-world countries where large farms and small farms installing, in effect, dumb terminals that measure every measurement that you need to farm.

We need to be able to do that here.

We are a farm-to-table operation, especially in Columbia County. And we're -- since you can't hire anybody now, because restaurants are closing because you can't hire a waiter, or get -- I can't get my car fixed because car mechanics have left,

1 you know, you need to automate, and that's the way to do it. 2 3 And --SENATOR MAY: I need to ask you to wrap up. 4 5 DR. TODD SCHMIT: -- other than that, I will 6 be quiet. 7 [Laughter.] SENATOR MAY: Okay, thank you. 8 9 And we're going to start again with five minutes, I think, for Felton, and then I --10 11 I -- I think some of the questions may be similar to 12 both of you. 13 ANNABEL FELTON: Thank you preparing me with 14 Mr. Berman who speaks so eloquently. 15 I came today because of a simple question 16 that my then-14-year-old daughter asked me 5 years 17 ago. Good afternoon, my name is Annabel Felton. 18 19 I'm chair of the Duanesburg Broadband Committee. 20 I live with my family in western 21 Schenectady County. We have a short commute to 22 Albany where both my husband and I work. When we built our house in the rural suburbs 23 24 and moved there in 1996, we were aware that there

25

were no cable lines.

We bought a satellite television dish and 1 went on with our lives. 2 Little did we know that cable and high-speed 3 Internet would never come down our road. 4 The question my daughter asked: Mom, why 5 6 can't we get Internet at home like normal people? 7 By 2014, we all needed Internet to do our jobs, to do our homework, to work from home. 8 9 So I told my family, I will get us wired broadband. How hard can it be? 10 11 I've learned it's very hard. 12 I've learned a lot, and I'll skip all the 13 list of things I've learned. 14 But among the things that I learned is that 15 something that doesn't exist, that could have helped 16 this problem, is mutual-benefit districts for 17 broadband. They don't exist. I have spoken to the staff 18 for Mr. Santabarbara on that issue before. 19 20 Create a county law, providing for 21 mutual-benefit districts. It would at least allow 22

local communities to pull themselves up by their bootstraps.

23

24

25

My town is very supportive and sympathetic. They formed -- the town board formed the

Duanesburg Broadband Committee and asked me to chair it.

And so I sit here before you.

Our goal, it was formed for the purpose of advocating for high-speed broadband to everyone, all residents in our town. We expect 100 percent service with fiber.

In order to serve all the locations anywhere, we need to know who was served and who was not served.

We are a Time Warner, now a Charter, franchise town.

Despite the franchise agreement with our town, Charter has steadfastly refused to provide service availability maps.

The maps posted by the New York Broadband Program Office are still based on 477 data, that first tab. It is notoriously inaccurate.

Unfortunately, the public believes the information on the Broadband Program Office maps is correct because it's provided by our government.

People have purchased homes because the maps told them service was available, when it was not.

A bad map is worse than no map.

Fix the maps or take them down.

1 My committee used boots-on-the-ground 2 information and surveys of town residents to

determine who was and who was not served.

We then created our own Google map, precisely showing the location of unserved homes.

Duanesburg has about 2,000 residences. And in May of 2018, when we created our maps, one-third of the homes were not served.

This is commuting distance to Albany.

Of those unserved, more than half, 313, had no BPO award because they are incorrectly reported as served by Charter.

It's beyond time to fix New York State broadband availability map. Remove any information from it based on the FCC Form 477 submission.

Now that we have accurate service maps, the -- my town, Town of Duanesburg, is pursuing broadband line extension on a road-by-road basis.

We're using franchise fees and \$100,000 provided to us by Schenectady County to provide trenching on roads to bring the cost down so Charter will serve us.

Even after settlement with the Public Service Commission, Charter continues to hide its build-out plans, and the Public Service Commission allows this

information to be redacted.

If Charter's required expansion will not serve all 256 homes remaining unserved in my town, we need to know that now, not after September 2021.

Charter's claim that their expansion information is trade secret is disingenuous at best, and fraudulent at worse.

Other providers have told me they can get the information directly from the BPO.

The only possible reason for Charter's non-disclosure is to allow them to cheat.

They want to count homes previously served as newly served under the 145,000 required in the settlement.

This is not a victimless ploy.

For every location left unserved, Charter may ultimately receive 80 to 90 percent grant funding from the BPO.

For the public, Charter's build-out plan can only be ascertained by tedious searching on the Spectrum address lookup.

The plan (motioning air-quotes) is an ever-changing hodge-podge of addresses, sometimes dropped in the center of an unserved road --

My address is one of them.

-- with no coherent strategy for serving to contiguous areas or for future build-out.

Charter, as it has always done, continues to cherry-pick the more profitable, or annoying customers like me, in our town, leaving behind isolated noncontiguous pockets of unserved homes.

Presumably, in the future, they will seek grant funding to serve these difficult-to-reach areas while simultaneously preventing any other Internet service provider from building into the franchise area.

SENATOR MAY: I need you to wrap up.

ANNABEL FELTON: To wrap up:

There are two more recommendations that

I have, and they involve the Department of Public

Service.

The Department of Public Service should require network build-out within franchise areas by incrementally lowering the density requirement for rural build-out by seven homes per mile each year.

This would eliminate unserved locations in franchise areas within five years.

Franchise holders cannot be permitted to leave isolated pockets of unserved homes. If franchise owners don't like it, they can leave.

1 The DPS, number two, should require 2 pole-attachment contracts by franchise area, not by 3 pole. This will reduce the incentive to cherry-pick 4 profitable homes within franchise areas by reducing 5 the extra cost of serving homes on lowered-density 6 7 roads. I just want to say that, last month my 8 husband and I drove our daughter to her new 9 10 apartment at college. I asked her if she was -- if she was sure 11 12 there was good Internet connection at her new 13 apartment. 14 She looked at me like I had -- I was nuts, 15 three heads. 16 She said: Mom, of course there is. Internet 17 is included in the rent. It's a utility. 18 Ladies and gentlemen, I still don't have broadband Internet at my home. 19 20 Fix the maps, and keep the grant funding 21 coming. 22

Thank you.

23

24

25

SENATOR MAY: Thank you.

And I just want to say, I think you mean the Public Service Commission, not the Department of

```
Public Service.
 1
               SENATOR METZGER: No, it's the same.
 2
               ANNABEL FELTON: I mean both.
 3
               SENATOR MAY: Is it the same?
 4
 5
               SENATOR METZGER: I mean, it's not the same,
 6
        but it's (parties cross-talking) --
               ANNABEL FELTON: I mean both.
 7
               SENATOR METZGER: (Indiscernible.)
 8
 9
               SENATOR MAY: But in any case, yeah, thank
10
        you.
11
               We can hear the emotion in your voice, and,
12
        obviously --
13
               ANNABEL FELTON: To some degree (parties
14
        cross-talking) --
15
               SENATOR MAY: -- there's good reason for
16
        this.
17
               Does anyone have questions?
               I thought I had -- well, I want to know more
18
        about the mutual-benefit districts.
19
20
               Is that something you write about in your
21
        testimony?
22
               ANNABEL FELTON: I don't -- actually,
23
        I didn't, no.
               But a mutual-benefit district would allow --
24
25
        would allow a town or municipal -- well, depending
```

```
1
        whether it's part of town law or county law, would
        allow that municipality to create a benefit
 2
        district, just as they would a lighting district.
 3
               But since it is not provided for in the law,
 4
        it is not -- it is left to the State; that is, it
5
6
        would have to be provided for specifically as a --
7
        under county or town law.
               SENATOR MAY: Okay, thank you.
8
9
               Questions?
10
               SENATOR METZGER: Well, first, I have a
11
        question, how you obtained the legacy maps? How?
12
        When?
13
               DAVID BERMAN: (Microphone off.)
14
               Oh, before the -- before the merger --
15
               SENATOR METZGER: Oh, so you've had them a
16
        while?
17
               DAVID BERMAN: (Microphone off.)
               -- through our franchise agreement --
18
19
               SENATOR METZGER:
                                 Okay.
20
               DAVID BERMAN: (Microphone off.)
21
               -- we requested them from the old Charter
22
        management.
23
               SENATOR METZGER:
                                 Right.
24
               DAVID BERMAN: (Microphone off.)
25
               The minute that we got moved into the Time
```

1 Warner management here in Albany, we --2 SENATOR METZGER: Lost access? DAVID BERMAN: -- (motions with hands.) 3 SENATOR METZGER: Yeah. 4 5 DAVID BERMAN: (Microphone off.) There's any number of people who would like 6 7 to draw and quarter the (inaudible) management (inaudible). 8 SENATOR METZGER: And I have a question about 9 10 the surveys you did. 11 So this is what I kept thinking with our 12 first panelists this morning, from the Public 13 Service Comm -- well, yeah, Public Service 14 Commission and the Governor's Office, surveys of 15 people, that's -- of residents, and they're not just 16 whether or not they have service, but what their service -- their level of service is. 17 And I -- did you -- did you also ask about 18 19 that in terms of speeds, and -- and -- or did you 20 just focus on service/no service? 21 ANNABEL FELTON: We focused on whether or not 22 an -- a broadband line was provided to individuals. 23 And we had very -- a very smart person on our committee who knows GIS mapping. 24

So we have a Google map, that's open to

anyone who wants to look, and on it is a flag for 1 every home that's unserved. 2 I have provided that information to both the 3 department -- the BPO. 4 Willing to provide it again. 5 6 We're keeping it up to date as the build-out 7 progresses. DAVID BERMAN: (Microphone off.) 8 9 Similarly, in Columbia County, we did speed tests of everyone around the county (inaudible). 10 11 SENATOR METZGER: Thank you. 12 ASSEMBLYMAN SANTABARBARA: Yes, Annabel, 13 thank you for attending the hearing. 14 I know Annabel is actually my constituent, and we've talked about this issue for a long time. 15 16 ANNABEL FELTON: Indeed. 17 ASSEMBLYMAN SANTABARBARA: And, hopefully, we 18 can make some progress here with this Commission, moving forward. 19 20 One of the things that just seems to be 21 recurring is, the maps, everybody's talking about 22 the maps, how inaccurate they are. 23

And that is true, what is -- what we have seen, and we saw this with the cell coverage, too, is that, you know, they're showing service, and you

24

go out there, and there's no service. 1 2 And whatever that could be attributed to, we need to find out. 3 I think, in this case, they're -- at least 4 the FCC is looking to update their maps with the 5 6 shapefiles and more accuracy. 7 But what you're doing locally, certainly, is very helpful in those -- in some -- in the rural 8 community that I represent. 9 You mentioned, one-third, you said about 10 one-third is not covered. 11 Does that include the school district? 12 13 Does that include, you know, buildings like 14 that, or just residents? 15 ANNABEL FELTON: Well, fortunately, our 16 school has been served for some time, so -- and it's in the village of Delanson. 17 So -- and the village of Delanson has service 18 19 from, originally Time Warner, and now Charter. 20 So the one-third were residential homes. 21 ASSEMBLYMAN SANTABARBARA: And you have dealt with the Public Service Commission. 22 23 You said, is it seven homes per mile, or density --24

ANNABEL FELTON: So --

```
1
               ASSEMBLYMAN SANTABARBARA: -- you asked them
 2
        to change --
               ANNABEL FELTON: -- the --
 3
               ASSEMBLYMAN SANTABARBARA: -- some of the
 4
 5
        requirements?
 6
               Can you go over those again?
 7
               ANNABEL FELTON: -- so -- so the -- are
        you -- the Town of Duanesburg has a franchise
 8
 9
        agreement --
10
               ASSEMBLYMAN SANTABARBARA: Okay?
11
               ANNABEL FELTON: -- with Charter/Spectrum,
12
        and the density required for them to serve without a
13
        contribution in aid of construction is 20 homes per
14
        mile.
15
               ASSEMBLYMAN SANTABARBARA: Okay.
16
               DAVID BERMAN: (Microphone off.)
17
               But the PSC minimum is 35.
               ASSEMBLYMAN SANTABARBARA: 35.
18
19
               DAVID BERMAN: (Inaudible.)
20
               ASSEMBLYMAN SANTABARBARA: Okay.
21
               ANNABEL FELTON: So we're at an advantage.
               But that leaves many, 257 now -- after
22
23
        Phase 3, 257 homes are still unserved.
24
               ASSEMBLYMAN SANTABARBARA: And -- you know,
25
        we -- everybody's talked about Charter, of course,
```

today.

And I did make note of what you said with the comptroller's office, and looking for accountability here, and what the new agreements are.

And I think I asked this question earlier when testimony was given, as to, you know, we have a new agreement, we have settlements, now they're back out there.

Are they doing what they're supposed to do; who's holding them accountable?

That's a question we're going to be asking, that's a question we're going to be looking for:

What's the accountability here?

Is this going to happen all over again?

And we also talked about the density, where the overlapping coverage, where, you know, are they getting credit for homes that are already served, and then someone is out there not getting the service that they promised?

So I think those are all very good questions that we're certainly going to add to our list.

But this will be a focus of this Commission, going forward, so, hopefully, we'll get some answers, and we'll hold the company accountable.

DAVID BERMAN: (Microphone off.)

There's a term Jeff Nordhaus used, which you 1 2 should pay close attention to. He said they did a "desktop audit," which 3 means, they sat at their desk and looked at a map, 4 and clicked off the poles that were claimed to have 5 been done. 6 7 It is not an eyes-on audit. And that's a --8 9 ASSEMBLYMAN SANTABARBARA: That's a big 10 difference. 11 DAVID BERMAN: (Microphone off.) 12 -- it's a big difference. 13 ASSEMBLYMAN SANTABARBARA: Yep. 14 And I -- again, I -- and I go back to 15 cellular coverage. You know, you got coverage on 16 this road. You travel on the road, the phone 17 doesn't work. 18 So it's the same thing with this, where the 19 map --20 DAVID BERMAN: (Microphone off.) 21 And this will lead to cellular coverage 22 because, without fiber (inaudible). 23 ANNABEL FELTON: That's right. 24 ASSEMBLYMAN SANTABARBARA: So I want to thank 25 you both for being here.

1 I know Assemblywoman Woerner has some questions for you. I'm going to give it over to 2 3 her. ASSEMBLY MEMBER WOERNER: Yeah, thank you. 4 I'm not familiar with whole-attachment 5 6 contracts. 7 Can you give me -- but I'm -- I -- I think I understand, conceptually, what you're saying, 8 9 which is that -- is that this particular contracting 10 model allows them to -- to only select certain 11 houses that they want to go to. 12 But can you give me -- I mean, can you just 13 give me some more information on what that means? 14 ANNABEL FELTON: Maybe you're more equipped to (indiscernible) pole charges. 15 16 DAVID BERMAN: (Microphone off.) 17 Right now, depending on who owns the pole, whether it's the electric company or the phone 18 19 company, you have to go to each of them and get 20 permission, and pay rent to hang your wire on that 21 pole. 22 And what I think my colleague here is 23 proposing, is that we do something --24 Sorry.

-- that we do something --

25

1 No?

There we go, maybe.

(Microphone on.)

There I am, echoing nicely.

-- that we could -- that you can do it in a broad swath, so that the entire town, or the entire area, was approved at once.

Right now, if you request from a utility the right to hang on the pole, they're obligated, within a certain time period, to give you an answer.

They ignore that.

So while you may go to NYSEG or, whomever, and say, "I wish to rent space on the pole to hang my broadband wire," they are obligated, under law, or under regulatory procedure, to answer you within 30 days.

It is easy to go, 180 days, 270 days, without an answer.

It's one of the biggest problems of the whole expansion problem, of just getting the permission.

So now you have to back your construction crews, your fiber-optic orders, et al., to meet those delays.

ASSEMBLY MEMBER WOERNER: So, in essence, if you've got a neighborhood -- let's say your

neighborhood, for example, you might have 10 utility 1 2 poles in a neighborhood. 3 And you have to have a separate contract for each pole? 4 ANNABEL FELTON: I believe they do. 5 And my suggestion is that, in a franchise 6 7 area, there would be one pole fee for all poles. Because I believe it's a monthly fee that's 8 ongoing; it's a continuing cost. 9 ASSEMBLY MEMBER WOERNER: Right. 10 11 Yeah, that's crazy. 12

DAVID BERMAN: Thank you.

13

14

15

16

17

18

19

20

21

22

23

24

25

ASSEMBLY MEMBER WOERNER: That's really -wow.

No wonder it's so difficult to get this -- to get fiber run, if you've got to ask -- if you've got to ask permission, by pole?

ANNABEL FELTON: And pay rent by pole.

ASSEMBLY MEMBER WOERNER: And pay -- well, I mean, I'm assuming the rent would end up being rent times ten.

But just the process of having to ask permission for each one, get a separate contract for each one, and then they could say, well, I don't really want you to use this middle pole.

1 So, now you're stuck. ANNABEL FELTON: Well, the real issue is 2 that, in rural areas where there's more distance, 3 there are more poles for the density. 4 If you say that this will be the pole charges 5 6 for all poles in this franchise, there's no incentive for them -- it doesn't cost them more to 7 do the lower density. 8 ASSEMBLY MEMBER WOERNER: Got it. 9 Okay, yeah, I can see where this is a great 10 11 recommendation. 12 Thank you very much. 13 SENATOR MAY: Thank you. 14 ANNABEL FELTON: Thank you. 15 SENATOR MAY: Thank you all very much. 16 ASSEMBLYMAN SANTABARBARA: Thank you. SENATOR MAY: So next we have Robert Puckett 17 from the New York State Telecommunications 18 Association. 19 20 And just as a heads-up, after that we have 21 four school-related representatives, and we're going 22

to bring them all up at the same time.

ROBERT PUCKETT: Thank you, Chair May.

23

24

25

I will, obviously, not read my testimony, and I don't even think I'll go over my notes that I made instead.

I just thought, I'm with the Telecom

Association. Been around for 98 years. We've got
about 40-plus carriers as members, all the way from

Verizon, large carriers, to smaller carriers, such
as TDS, that -- that serves the town of Augusta in
your district.

I thought what I would do is, Assembly

Member Woerner was earlier asking about, why don't

we just order companies to deploy broadband? The

phone lines are there, the electric lines.

And I think what you've heard today from some of the folks is, back in the '20s, '30s, '40s, about when we were organized as an association, there were federal fundings to deploy electricity in the rural areas, as well as telephone.

And also, back then, the telephone industry, as the old telephone company, was a monopoly, and, therefore, the pricing structures of things were developed, and approved by the states and the regulators, to extract subsidies from some ratepayers to help pay for things where the rates charged don't nearly cover the cost of those services.

You remember when long distance was 30 cents

a minute.

Business subscribers used to pay more than residential subscribers.

Urban subscribers pay more than the cost of providing service in urban areas.

And those were all internal subsidies that flowed from urban America to rural America to help build these networks.

Now, with competition, what happens?

You can't build in a subsidy, the long
distance rates, when they're -- when you're
competing with other providers who don't have any
obligations to provide service. They can go and
provide service wherever they want.

Same thing for urban rates.

The first competition was in urban areas.

So the telephone companies are competing now with wireless and cellular, cable TV. They can't necessarily build in subsidies to help cover the cost of deployment in the rural areas where it's, basically, uneconomic.

So that's why we think that, if more needs to be done, and I think from what I've heard today, a lot of folks would agree with that, we still support the public-private partnership model that has been

used in New York.

And I've got to say, as it was said by an -earlier folks, New York really leads the nation.

Nobody has come close to what this state has
committed in resources to try to solve the rural
broadband dilemma.

So those are my comments.

Just a couple other thoughts.

CWA mentioned the elimination of service-quality measures.

Nobody told my members that, because, just last year, Verizon reached a settlement with the PSC, after a multi-year service-quality proceeding.

And this year, just several months ago, although Frontier is not a member of my organization, I believe they reached a settlement agreement with the PSC, again, on service-quality issues in meeting the PSC's service standards.

A lot of talk about maps.

I'll just note that that's also occurring on the federal level. The FCC is -- has issued some orders on that. Congress has held hearings on that.

Even a gentleman mentioned earlier,

Jim Stegman, who did a lot of work for New York in

the New York grant program, has put forth a proposal

with some national associations on how to make the maps better.

So with that, if you have any questions, I'd certainly like to hear them, and -- if now, or, contact us anytime.

SENATOR MAY: Okay.

Well, let me start, because I do have -
Thank you for your testimony and for keeping it short.

-- we have been hearing about these proprietary maps that were -- and in particular, Charter/Spectrum will not release.

ROBERT PUCKETT: Right.

SENATOR MAY: What is the conceivable justification for that, and what can be done about that?

ROBERT PUCKETT: I certainly can't speak for Charter because they're not a member of my organization, but, it's competitive sensitivities.

If they -- again, if they let the world know where they're going to build, does somebody else come before them to try to beat them to the market? -- is my own personal thought.

I have no basis -- I don't know what Charter's thinking is, but that's -- that's what

I would offer.

SENATOR MAY: And the -- we've heard a lot about the problems of a lack of competition, and then also the problem of monopolies that aren't doing what they should. So they've got a region, but they're not building, taking the next step in covering, sort of, stranded properties that are near them, or something like that.

But tell me what your -- your association, do you talk about these kinds of issues, and what sorts of position do you take?

ROBERT PUCKETT: Well, yes, we do talk about it.

You've got a competitive world now.

And a company, as a whole, has to -- a for-profit private company has to make a profit.

It used to be guaranteed. It's not the case anymore.

So making those investments have to have a return on investment.

And so you have a service area of some geographic area. You have to decide where to deploy, and where can you deploy, with your money, investor money, shareholder money, versus, if there's grants available, then, certainly, that

makes that decision much easier, to make sure that it's economically feasible.

I'm not sure if that answers your question.

But, certainly, we support the grant program.

Again, if additional actions are needed, we think another round, as mentioned earlier, Round 4 or 5, would be the appropriate way to go.

SENATOR MAY: Well, we also heard a lot about the need for regulation.

And, really, since, effectively, this is a utility, in a sense that people can't (parties cross-talking) --

ROBERT PUCKETT: And we've always advocated, there is a difference in regulation between the industries. Whether it's the old telephone company, cable company, wireless, there is -- there are different levels of regulation.

We've always thought that there should be a need to review all of that and just see where things stand.

And in some ways, the horrific story I heard from the poor lady from Port Byron, you know, I was pulling my hair out, listening to that.

The reason she's going through that problem is because there's a regulation that requires

Spectrum to have a franchise in every municipality they want to serve.

We've always advocated that there should be a statewide franchise, just like they gave the cable TV companies a statewide franchise to provide telephone service; they could go anywhere they want, whenever they wanted.

We've always argued that the telephone company should be able to provide video services on a statewide-franchise basis, where they want to go, without having to go to every village, every town.

I mean, unfortunately, in her situation,

Spectrum was willing to provide her service, only to

find out they didn't have a franchise agreement with

this particular Town that she happened to live in,

and they were, unfortunately, following the rules

that they couldn't go in there unless they had a

franchise.

SENATOR MAY: Is that -- we also hear about -- about poles and wires that are fiber, that goes right past somebody's house, but they can't connect it into their house.

Is that also -- would you --

ROBERT PUCKETT: That does occur.

Well, there's different -- I don't want to

get too much in the weeds, but, there's backbone, fiber, then there's local fiber.

And I do know, in several situations in the grant program, fiber runs down the street. And this is one census block, and other side of the street is outside of that census block.

I know a lot of my members are going ahead anyway, and going to provide, or have provided, drops to those homes so that they could provide them fiber-optic service, even though they're right over the line from the -- from the grant program.

SENATOR MAY: Okay.

And --

ROBERT PUCKETT: Now, are there situations where maybe that's not happening, I suspect there would be.

SENATOR MAY: -- oh, I'm out of time.

But I do want to ask if you -- or, include satellite service in your association? And --

ROBERT PUCKETT: No, they're not members either.

SENATOR MAY: Okay.

ROBERT PUCKETT: We're, basically, the landline telephone companies --

SENATOR MAY: Okay.

ROBERT PUCKETT: Both the incumbents that 1 2 have been around for 100 years, except for Frontier, and the new competitive local-exchange carriers, not 3 cable companies, but telecom carriers, such as 4 5 CenturyLink, companies like that. SENATOR MAY: Okay. Thank you. 6 7 Anyone else? ASSEMBLYMAN SANTABARBARA: Assemblywoman 8 9 Woerner. 10 ASSEMBLY MEMBER WOERNER: Thank you. 11 So you started your testimony by attempting 12 to create a -- to compare the '20s and -- the 13 1930s to today. And you said, back then, when we were 14

And you said, back then, when we were electrifying rural communities, there was a monopoly.

15

16

17

18

19

20

21

22

23

24

25

There were public dollars to subsidize, and then there was the universal service fund that, basically, taxed the urban communities to the benefit of the rural communities.

And I would just suggest to you that, we -for all intents and purposes, most of the rural
communities are dealing with a monopoly.

There's a monopoly. There's one provider, and that's it.

And we have tons of public dollars that have just been spent, \$497 million, has just been spent, to provide broadband service to the rural communities.

We have this mechanism for the universal service fund. Whether we're using it or not, that's a different question.

But it would seem to me that the conditions exist today that are very similar to the conditions in the '30s.

So I go back to: What do we need to do to fully create those circumstances?

Because, clearly, we're not -- what we're doing, while it's getting us some -- it's moving the needle slightly, it's not moving the needle far enough for our communities, because, as the fellow before you said, we're shooting at 100-megabit target. But, really, the rest of the world is on 1-gig target.

And for us to have economic development upstate, which is, I think, what we're all trying to do, we need to be able to support 1 gig, and beyond that as the technology becomes available.

So, I'm going back to: Tell me why you think we shouldn't try to recreate the conditions of the

1930s --

Because we're almost there now.

-- to ensure that we get the achievement of -- of -- of true broadband, fiber to every home?

I mean, it seems like a laudable goal, and it seems like we're close in the -- in terms of the practical conditions, to being able to do what we did in the '30s with electrification.

ROBERT PUCKETT: Maybe I wasn't clear when I talked about universal -- I was talking in the subsidies, I was talking about the telephone industry side of it.

The electric, there was federal funding for that as well, but also for the telecom side.

And I don't disagree with some of your thoughts.

I think, New York, yes, they've spent four hundred -- five hundred million, four hundred seventy-five of grant money.

I think it's moved the needle a lot.

Is there -- stuff still have to occur?

Certainly, I would agree with that as well.

ASSEMBLY MEMBER WOERNER: You know, the bulk of the dollars went to a relatively small percentage of fiber to the home, and the rest of it is

satellite.

I mean, that's the real -- that's the reality.

And -- and that's what has become clear out of all this testimony, is that -- is that only a relatively small number of people actually got fiber to their house.

Most of it is satellite, which is, I think everybody agrees, not really broadband.

And -- and this is -- you know, this -therein lies our problem, is that the -- we've got
to do some -- we've got to -- we've got to stop
being satisfied with satellite, and -- and really
step up to the plate and say, this is about getting
wire to each house, because that's the platform on
which we're going to get 5G, and on which we're
going to be able to grow the technologies to achieve
some service levels that actually make us
competitive, upstate, with the rest of the world.

ROBERT PUCKETT: Right.

Yeah, my members, out of the 175,000 landline of the grant money, the units, the locations covered, about 112,000 were -- were awarded to my membership.

If you include the -- the

1 Time Warner-Spectrum merger build-out requirements, you're up to 320,000 additional locations -- homes, 2 businesses -- across the state. 3 So I think that certainly is -- is trying to 4 attack the issue. 5 6 And, again, if the Legislature and Governor 7 feels that additional steps are necessary, we certainly would support it. 8 9 And we believe, again, that the private-public partnership is the best way to go 10 11 about it. 12 SENATOR MAY: Great. 13 Anybody else? 14 Did you have a question? 15 SENATOR METZGER: (Shakes head.) 16 SENATOR MAY: No. 17 ROBERT PUCKETT: Thank you. 18 SENATOR MAY: Thank you very much. So I mentioned our schools. 19 20 I guess there are five on my list. I hope 21 everyone is still here. 22 Five people, we'll try to get five chairs at 23 the table. 24 You'll have to share -- share microphones. 25 This isn't to take time away from you, but

just because, once again, I think there may be common questions for you. And, also, we do -- we would like to move this along.

So let's start with Mr. Ciaccio.

THOMAS CIACCIO: Very good. You did a good job with that.

I just want to first thank everybody for allowing me the chance to come here and speak on behalf of our school district and school districts like ours.

This is a very significant issue in our school district, and I want to kind of put it in a context that maybe you can understand what students go through on a daily basis.

So, first, my name is Tom Ciaccio, and I'm the superintendent of the Fonda-Fultonville Central School District. And we are a small rural school district about 40 miles west of here.

We have about 1,350 students, and about 40 percent of our entire district does not have access to broadband Internet.

And I live 6 miles away from the school, and I'm one of those people, and I have two children in the school district.

Just like any school district across the

state, we do everything we can to set our students on a path to success.

And we think what's important to that mission is technology, and the development of those technological skills in our students.

So I want to paint a picture of, kind of, what our students look like compared to other students.

So my first student is Gianna, and she's a student that is in an urban school district.

She's in a school district that has a one-to-one initiative, where she's given a Chromebook to take to her classes and take home each and every day.

Her school district, and everybody in their school district, has 100 percent access to broadband Internet.

She goes home at the end of the school day.

She takes this Chromebook out of her backpack. She opens it up, she gets online, she starts doing everything that her teacher has downloaded (sic).

She downloads videos. She downloads pages of documents. She works on homework. She sets up chats with the people in her group that are her classmates, to work on research reports, and things

like that.

Everything at Gianna's disposal is one click away.

Let's take Joseph, who comes from a rural school district, where 50 percent of the students in that school have access to broadband, but Joseph is not in that -- in that group. His family does not have exposure to that.

He has the same Chromebook that's given to him by the school district.

He goes through the day, just like Gianna does, and getting exposed to all the skills necessary.

When he goes home, he takes the Chromebook and he sets it on the coffee table, and that's where it has to stay, because he can't open it, he can't get to the things that he needs to get to.

So then he goes to his room and he gets out his phone, because that's only access he has, from a cellular perspective and his provider, to get on that Google Classroom, to be able to access the pages of articles he has to read, on a 4-inch screen. Trying to download those videos to help with his research, but, spotty cellular service in our rural communities just not going to happen.

So, for him, the information is not a click away. It's miles away.

And I bring those two examples because

I think, looking at it through the eyes of a child,

allows you to see that, if you compare those two

students, the absence of broadband stunts a child's

ability to excel; stunts their ability to achieve

and to get to a -- to a -- an area where these

technological skills are second nature to them.

And it puts that child at a distinctive disadvantage.

So if Gianna's a freshman and Joseph is a freshman, just think of:

Every day that Gianna goes home, she's able to home those skills every day.

Every day Joseph goes home, he's trying to figure out how he can get onto these things, to be able to access what he needs to do.

And over a 4-year period of time, that gap grows.

So my students come out and try to compete, and do well in college, and have these skills that maybe take a while for them to acquire on that type of a basis. Or, they go out and compete at a job, where we find, when we talk to employers, they don't

care if you come and you're somebody who understands 1 their business, or even the role within the job that 2 they're looking for. 3 Are you resourceful? 4 Can you go on the Internet? 5 6 Can you access information at the drop of a 7 hat and be very quick to do that? And Joseph is going to be behind the mark 8 when it comes to that. 9 So for us, I'm going to echo what other 10 11 people have said. 12 I appreciate everything that you are trying 13 to do. 14 We truly believe, like you, that broadband 15 Internet should be a basic utility; something that 16 everyone has access to if they so choose, and it 17 shouldn't come down to where you live. Information in 2019 should be a click away, 18 it shouldn't be miles away. 19 20 So that's kind of a consolidation of what 21 I had to say in a short period of time. 22 So, thank you. 23 SENATOR MAY: Thank you. (Indiscernible) 24 very well.

Who was next?

25

David Little. 1 2 3 Rural Schools Program at Cornell. 4 5 6 7 8 9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

DAVID LITTLE, ESQ.: Hi, I'm Dave Little. I run the Rural Schools Association and the

That's more pictures than my other -- mother has ever taken of me in my entire lifetime, I think.

We've heard hours of testimony about, the what, the where, the how, today.

So let me give you just a few minutes about the "why."

This is just a circumstance that's elemental to education.

If you go back to when I graduated from high school, there was 17 million acres in agricultural production in New York State.

Today there's seven.

Okay?

When I graduated from high school, rural New York had the economic capacity to be able to bail out New York City from what we commonly call "bankruptcy" right now.

And it's time to return the favor.

The president of SUNY Cobleskill says that our policies are what are standing in the way of our progress.

And I think that's true, both on two major fronts, one of which we're talking about today, which is information access, and the other is the way that we fund our schools.

In the past 10 years, we've had 10 straight years of declining sales tax revenue from rural New York. We've had a million people leave rural New York.

I rarely go to a school district -- half of the school districts in New York State are my members -- and I rarely go to one that hasn't seen a third of their students decline from where they started with.

So -- and we hear all the time, from a policy perspective, why you need to do things differently.

You need to consolidate.

You need to -- digital learning is the key in the rest of America.

And we built, in essence, the Great Wall of China around that in New York State, from a policy perspective.

We don't fund our schools in a way that allows them to take advantage of digital learning.

And, from a labor standpoint, we don't allow digital learning in the ways that others have.

We have this concept of digital learning,

I think in New York State, that's about a generation
behind.

I mean, if you really want to know about the capacity of digital learning, ask the Pentagon what it thinks of the game "Call of Duty."

It educated an entire demographic of exactly who they wanted to know the information on things like, military tactics, loyalty, chain of command, battlefield operations, logistics, weapons; everything that they would want to know their demographic to know.

They get it ready-made now through digital learning.

We can think about things like, a surgical resident, or an airline pilot, much more individualized.

It allows us to try and overcome things like, English-language learners, the poverty gap, the language gap that students in poverty come to schools with, can be overcome with that.

And as everybody has said, if the only place that you can get that is in school, then digital learning can overcome time and distance in the way that the school bus overcame it a generation ago, to

try and create these merged school districts, to bring people together to do sequential learning and the things that we would want to do.

We could do so much more if we had this in place.

You know, people have talked about, it was almost a throw-away a line -- a throw-away line, 5 hours ago, was that, and kids can't do their homework.

Do you understand the implications of that?

It's the demise of New York State, is the implication of that.

If you throw away the entire demographic of rural New York, which is quickly happening before our very eyes, at this very moment, I keep saying, we're in crisis.

And if it were happening to any other demographic within the state, it would be in every major newspaper in America.

And the other thing that I would just briefly touch on, is the fact -- and I'm astounded that I haven't heard it today -- Sprint is trying to merge with T-Mobile.

And they've gotten federal approval to do that, based on verifiable and enforceable contracts

that they have offered to create broadband in rural America. That's the whole point of their merger, is to create broadband in rural America.

And we've been here for almost 7 hours, and nobody's touched on it.

And one of the reasons that nobody has touched on it is because the State of New York is suing over this. The attorney general is trying to block it in New York State.

We need a legislative commission to oversee this. We need the public-private partnerships that people have talked about on this issue.

I'm not a technological expert, but I do know that if we don't fix this quickly, and I go out to more school districts, for years I did the honors banquet for Chautauqua, where they honor the valedictorian and salutatorian of every high school.

And every time they would come up, Where you going to school?

Jamestown Community College. Jamestown Community College. Jamestown Community College.

And, yet, rural students are dropping out of our community colleges and 4-year programs at a 75 percent rate.

Okay?

We graduate everybody according to the state standards, and they don't have the breadth of curriculum, they don't have the opportunities that were talked about here, to be able to be competitive once they reach the next level.

And we're not doing them any favors; and, in turn, rural New York can't do us any favors in the way that we did a generation ago.

SENATOR MAY: Thank you.

Next on my list is Carolyn Bobick and Julie Marlette.

CAROLINE BOBICK: I'll let Fry take over for Julie.

SENATOR MAY: Oh, okay.

FRY (no last name given): Thank you, and Happy Constitution Day.

SENATOR MAY: Thank you.

FRY (no last name given): I just want to highlight a couple of points, so I don't repeat what you've heard already, or what you I'm sure will hear.

You heard about the homework gap, the schoolwork gap, especially in terms of one-on-one technology programs, like Chromebooks.

That's all true, that's all important.

The couple additional items that I want to talk about:

This isn't just a teacher and student dynamic.

The vast majority of districts, and increasing number of districts, communicate online with parents of those students, making sure, in providing those parents of students with the tools to support their children, their students, as they complete their assignments; making sure the parents are informed of the student's progress.

That's an advantage that technology offers, but if those parents are in communities and school districts where there's either no Internet access or insufficient speed in Internet access, that additional tool that those parents have is severely compromised.

We've heard over the past number of years the State's desire to pursue and implement computer-based adaptive testing.

Obviously, that becomes problematic, if not unrealistic, for a number of districts statewide, particularly in rural areas as we've talked about.

Even if there's access, if that bandwidth is not strong enough, if that access is too slow, in a

number of school districts, and doesn't meet the recommendations or needs of whatever particular program the school district is using for that testing, that becomes unrealistic and unworkable as the State, as a whole, tries to move towards that computer-based adaptive testing model.

The last piece I want to mention, I know it was discussed a little bit earlier today, but, we at the School Boards Association are fully supportive and fully engaged on the issue of net neutrality.

It must be restored.

Not only does it offer affordable and more affordable access for communities throughout the state, but it offers greater program -- program and content diversity for -- for school districts and students.

So it's important that, you know, whether we're looking at a public investment or a private investment or a combination thereof, we need investments that expand access.

It's critical for not just the next generation of students, but as we heard, you know, it's critical for the current generation of students that are being educated in our schools right now.

SENATOR MAY: Thank you.

1 Robert Lowery.
2 ROBERT LOWERY, JR.: Yep.

I'm Bob Lowry from the New York State Council of School Superintendents, and thank you for holding this hearing and inviting us to testify.

In my written testimony I try to provide a portrait of rural school districts.

They tend to be smaller in enrollment, but larger in geographic area.

For example, the average North Country school district is 177 square miles.

For perspective, New York City is 322 square miles.

So, try merging two of these districts, you may be transporting kids over an area the size of New York City.

This makes it hard for these districts to consolidate, or even just to do shared physical classrooms.

Also, they tend to be poorer, about half the property wealth and income per pupil of the state average.

And as a result, as I've said, they tend to be -- they were capped by circumstances before they were capped by law.

The average (indiscernible) rural school district can raise only \$67,000, with a 1 percent tax increase.

So both physical and fiscal limits restrict the ability of rural school districts to offer the opportunities that we would want for our own children.

Recently, the board of regents announced a plan to review diploma requirements. In some reports that's been oversimplified to, Should we have regents exams anymore?

Actually, it's going to be a much broader effort than that.

Part of what we will say in those deliberations is not -- what matters most for students is not how they do on a single test on a single day, or even five of them, but do they have opportunities to take classes that prepare them for success in whatever they pursue after high school?

A year ago, Education Trust New York did a report on what they termed "gatekeeper classes," things like algebra in eighth grade, calculus, physics, chemistry, advanced foreign languages, AP, and international baccalaureate.

Large cities tend to not have calculus,

physics, chemistry, but high-need rural districts are least likely to offer their students even a single AP or IB class.

Technology, online learning, those provide a tool that schools can use to offer students opportunities that will prepare them for success.

Also, as Brian touched on, our members think adaptive testing is the key to improving the assessments that we have to give every year to kids in grades 3 through 8, in English-language arts and math.

With adaptive tests, the questions adjust in difficulty as students progress through the test.

That makes it possible to have shorter tests, to get better information back faster to families.

There are districts that use adaptive tests for their own diagnostic purposes, and (indiscernible) aren't a problem because families and educators see the value.

But, frankly, in our conversations with superintendents, they don't talk about problems with connectivity for their schools.

You know, the largest share of the \$1.4 billion in Smart Schools Bond Act money that's been allocated so far has gone for school

connectivity projects.

They talk about what Tom talked about:

Connectivity in the home, and large numbers of

families that aren't connected, and the disadvantage

that that creates.

Some of the solutions, you've heard already.

Superintendents, who we've spoken with, they've expressed frustration with the quality and accuracy of the maps of service. They say they're aware of examples where cable has been strung through rural neighborhoods, but the final step of connecting homes has not happened yet.

And so they suggest, you know, we need intervention by a state authority to make sure that that happens.

Also, you know, some other things that could be done:

In Washington right now, the federal communications commission is considering a proposal to consolidate funding for education, a so-called "E-rate program," with health-related Internet projects.

That would have schools and hospitals competing against each other.

It's something that we've written to oppose,

and we would urge you and colleagues in both parties to weigh in with Washington.

We've also suggested in our written testimony, making the installation of Wi-Fi on school buses reimbursable, because, again, you have students traveling long distances. They may not have the Internet at home.

That's a simple step that could be taken to help those students.

So, again, thank you for inviting our testimony, and be happy to try and answer any questions.

SENATOR MAY: All right, thank you.

And thank you all for keeping within the time limit. I really appreciate it. It's been a long day.

I do want to say, I love the example that you gave of the two students.

And I have to say, as someone who lives in Syracuse, where a quarter of the students don't have Internet access because it's cost-prohibitive.

There are lot of issues that we have to deal with here.

But, yeah, we've got to make sure all our kids have got that.

I don't think I have any specific questions for you.

ASSEMBLYMAN SANTABARBARA: First of all, I want to thank you all for coming up together.

Actually, it was great to hear, you know, one after another, voices surrounding the issue of education, and how this affects students of all ages, and it also affects our schools in the ability to teach twenty-first-century technology, which is, really, just basic technology now.

So I want to thank you for sharing your comments, I want to thank you for being here.

A couple of notes.

The Sprint and T-Mobile, I don't know who mentioned the merger, so, that, I took note of that.

I think that's something we should look into, and should be having -- looking for some oversight on that, because, certainly, you know, cell -- cellular coverage ties into this whole discussion.

So we're going to take a look at that.

The Wi-Fi on the buses that was just talked about, that's an excellent point, because, especially in rural communities, we have to think about the bus rides. Sometimes they're very long bus rides. And, you know, using that time

effectively, kids being able to access Wi-Fi on a bus, would be very advantageous to them. It would help them do schoolwork, help them use the time wisely.

Yes, you have a comment on...?

DAVID LITTLE, ESQ.: Just to refer you to Watkins Glen, Watkins Glen put Wi-Fi onto all of their buses. And instead of sending them back to the bus garage every night, they send them out to the most remote corners of their school district to create hotspots for the kids in those areas.

ASSEMBLYMAN SANTABARBARA: And just -- yeah, and that's an excellent point. I think that that's something that we will look into as a commission here. I think that's a good point.

And the net neutrality, that's certainly something we've been talking about here at the Capitol, and I think it's very important.

I want to thank Superintendent Ciaccio, who is from my district.

Fonda-Fultonville I've visited many times, in Montgomery County. And we shared -- we've shared the concern over this issue.

And it's great to have a local voice from my district up here.

1 How does -- I guess one question:

You said, you know, you don't live far from the school, you don't have service.

How does that compare to all the students; what percentage would you say --

THOMAS CIACCIO: I would say --

ASSEMBLYMAN SANTABARBARA: -- when they leave the school, they have, virtually, no access?

THOMAS CIACCIO: -- in terms of broadband,

I would -- what -- it depends on when you survey
students.

We surveyed them couple of years ago.

Probably 40 percent of our students do not have access to broadband.

Now, they do use cellular and their carrier.

But something that one of my colleagues here touched upon was, you know, in a small rural school district, you do everything you can to offer your students opportunities.

College-based-type courses that come with expectations, that are extremely important for those students to do outside of school, typically revolve around digital access, and being able to get onto their computers, not their cell phones.

And from a school district standpoint, we

would love to provide hotspots, and do those types of things. But from a budgetary standpoint, when 40 percent do not have that, it would be -- it's almost impossible for us.

ASSEMBLYMAN SANTABARBARA: And we talked a few years back, I think there was even an announcement at the school, the federal government was looking at funding some of the broadband service.

THOMAS CIACCIO: And Senator Gillibrand came, and (indiscernible), and you had a press conference at our school. And that was two years ago.

So two years ago, where I live, the closest house that had broadband Internet was a half a mile away, two years ago.

So, fast-forward, after that press conference, and all these things that we're going to try to hold Spectrum to at that time, and other service providers, that access to my house is still half mile away at the same place that it is.

But, going back to the maps and making sure that things are accurate, I'm -- I think I'm included in the 98 percent that was spoken about this morning, that about 98 percent of New York is covered in broadband services.

And that is -- you know, I would say, if they're including me in that category, it's because I did the same thing that someone else did, and called Spectrum at the time, 4 years ago, and said, I'd like to have Roadrunner, and all those things at my house.

Sure, no problem. We have it, we can offer it to you.

At the end conversation, they wanted to charge me \$40,000, because they wanted me to pay for the line to run up.

So I'm counted in that 98 percent because it's "offered" to me.

SENATOR METZGER: Right.

THOMAS CIACCIO: But from a realistic standpoint, those things need to be fleshed out to what is real and what is fictional.

ASSEMBLYMAN SANTABARBARA: What's affordable, right.

And through the rounds of the New New York Broadband Program, have you seen a change?

I know some funding was awarded in the area, Montgomery County.

Have you seen a change in the school district, or in the local community, since the

funding was awarded?

THOMAS CIACCIO: From the -- I would say, from the broadband perspective, we have not seen a change.

But, from the Smart-Schools perspective, and that money that's come our way, it has absolutely allowed us to create an infrastructure in our school that supports what we need to do at the school, from a broadband sense, and those types of things, bandwidth, and those things.

So the Smart Schools absolutely has helped us, but, it's reaching those kids.

As Bob said, we're 140 square miles, which is a pretty large, when you're talking only, you know, 1,300 students.

We definitely need to see more of these people held accountable. And the price for doing business in New York is to provide broadband all across our rural communities.

ASSEMBLYMAN SANTABARBARA: Thank you.

Thank you for testimony today.

SENATOR METZGER: Sure, just a couple of comments -- just a couple comments.

Thank you so much for your testimony. This is so important a topic.

You know, I -- a school in my district, in, actually, one of the less-rural communities, had a -- just had a capital project that included a distance-learning classroom.

And, you know, when I went in and saw this, this classroom, I thought, this is going -- this would be so great for my more-rural communities, cash-strapped school districts, that can't offer those AP classes, that can't offer those -- a whole range of classes, languages and the rest.

But, of course, you can't have them unless you have broadband.

And so this is -- this is really important.

I do -- I love the idea about requiring that Wi-Fi be on the buses, be reimbursable.

You need cell, though, don't you?

ASSEMBLYMAN SANTABARBARA: Need something.

SENATOR METZGER: And, unfortunately, we're actually on a cell service task force -- Rural Cell Service Task Force.

And I know, at least in my area, a lot of the main roads don't have cell service.

So that's -- that issue has to be addressed for that (indiscernible).

SENATOR MAY: Okay, great.

1 Well, I guess that's it for us. 2 I do want to say, it was great to hear from all of the school representatives. 3 And I kind of wish we had a library person up 4 5 here too, because they also are absolutely key to this whole issue, I think. 6 OFF-CAMERA SPEAKER: Anchors. 7 OFF-CAMERA SPEAKER: Thank you. 8 9 OFF-CAMERA SPEAKER: Thank you. SENATOR MAY: Thank you all. 10 11 Freda Eisenberg. 12 SENATOR METZGER: Thank you, Freda, for 13 waiting it out. 14 FREDA EISENBERG: Oh, thank you for --15 SENATOR MAY: I want to thank everybody who's 16 still here (parties cross-talking). 17 FREDA EISENBERG: Thank you, Senator Metzger; thank you, Senator May, for not only inviting me to 18 participate in this hearing, but also for the 19 20 devotion that you've shown to the subject matter. 21 I'm Freda Eisenberg. I'm commissioner of 22 planning and community development for 23 Sullivan County. 24 And at this point in the day, there's really

very little I have to add for you, so I'm going to

25

try to make this short.

There are a few things I would like to underscore.

One, the maps cannot be emphasized enough.

Sullivan County is, basically, shown as fully covered, and we know we're not fully covered.

And that's hampered our ability to participate in the broadband -- the New New York Broadband Program. It's precluded us from, you know, certain eligibilities.

So, accurate maps are important.

A few years ago, before the New York

Broadband Program, Sullivan County GIS did our own

maps. And we tried to identify areas that met the

20-unit-per-mile threshold, that we showed were not

covered.

And we had, you know, a number of these, and we went to Time Warner at that time. And they said, Well, we have to verify this.

And they had two separate companies verifying it.

And at the end of the day, when we all came together, there was still discrepancies as to what and wasn't covered.

So, I relay this anecdote to emphasize the

importance of on-the-ground verification of, you
know, what does and what doesn't have service.

Other factors to be addressed in any assessment are, again, the non-disclosure agreement.

That's not only, you know, hampered our ability to respond to constituents when they call with questions about their service, but it's hampered our ability to be an effective advocate for service.

If we don't know what is not going to be covered in any kind of agreement, we can't go and fight and -- or -- or develop ways to -- to provide that service.

Capacity: Capacity was mentioned.

It was mentioned that, you know, there's been an attrition in basic, you know, workers going out and doing the cables.

But we've also found that there's been a reduction in -- we've lost our government-service relations people at, you know, Time Warner, and -- and there's been turnover at Frontier.

And so our ability to get information, again, so important to be able to advocate and plan, has also been hampered.

Sullivan County does plan to launch a pilot

program using county (indiscernible) 911 communications towers and Wi-Fi.

I took note earlier today, one of the speakers cautioned against this approach, but, we have been waiting out the solution for years.

And our recent construction of new 911 towers, plus the completion of a new jail, has created an opportunity for us to test a pilot approach, where we will use Wi-Fi and extend signals for about 4 miles around the area of Monticello.

Monticello, actually, is a fairly well-served area of our -- our county, but it's also an area where an issue that hasn't been mentioned frequently today, it is, you know, relevant, which is the cost of service.

You know, we have very high rates of poverty, you know, in that area, and so the cost of service is a barrier.

And our pilot will allow us to test a lower-cost approach.

If that's successful, we will want to roll it out to other areas of the county, particularly areas that are not well served, such as the upper Delaware River Corridor, which is, you know, an important tourism corridor. It's a national park in our area

1 where businesses and residents, you know, lack sufficient service. 2 So to conclude, again, to be short: 3 I'd like to ask that, in any future iteration 4 of the Broadband Program, that there be funding for 5 6 municipal efforts, as well as the public-private 7 partnerships. 8 SENATOR METZGER: I just want to thank you 9 again, Freda, for coming out and being, you know, the representative of our region and the issues we 10 11 face. 12 So, really appreciate it. 13 FREDA EISENBERG: Sure. 14 Thank you. SENATOR MAY: Yeah, I appreciate it too. 15 16 Thank you very much for being here, Freda. 17 Renee? RENEE ST. JACQUES: I'm here. 18 SENATOR MAY: Second-to-last. 19 20 Thank you for staying. 21 RENEE ST. JACQUES: Yep. No, of course, of 22 course. 23 I'll keep it -- I'll keep it quick. 24 So, I'm Renee St. Jacques. I'm assistant 25 director of public policy at New York Farm Bureau,

some of you know.

We've heard a lot of the stories and issues today, and lot of it's the same for the farmers across New York.

They are small businesses, or large businesses, and they still need that capability for broadband. And it's important -- it's an important tool, as you know, communication with current and prospective customers, advertising their products, things like that.

And then you think about grant applications, or things for -- like that, provide by the government.

Most of those applications are also being made available online, so how are farmers supposed to be filling those out?

We get calls about broadband access, and they say, Well, can you send me some information?

And I can't do it by e-mail. They have to send -- I have to mail it, snail mail.

So it's definitely an issue across New York for a lot of farmers.

And I just wanted to share some statistics
that our -- on the -- on the testimony that -- from
the National Agricultural Statistics Service, they

announced their statistics, their census, in -- for 2017. And 81 percent of New York farms, technically, have access.

But as we've been discussing, access is -- does that -- that doesn't mean that they actually have reliable broadband.

But only 25 percent of those farms said that they actually conduct agricultural marketing activities over the Internet.

That's a big problem.

And whether that means that it's only available during certain seasons; whether the corn is too high, or, maybe the leaves -- you know, during the winter it's available, and then the leaves go on the trees and it's not available anymore.

It's definitely a problem across the state.

And I guess, moving forward, there was a lot of options, a lot of ideas, for what we could do.

I think just trying to keep farmers in the conversation, going forward, is very important, and we -- because we see it as a big issue, and we would definitely like to see more access across the state.

So thank you for the opportunity to speak today.

1 SENATOR MAY: Great, thank you. I have a couple of questions. 2 One has to do with estimating the economic 3 impact of lack of service, or, you know, the 4 building out service. 5 6 What would be really helpful? 7 would be --8 9 10 11 12 13

14

15

16

17

18

19

20

21

22

23

24

25

I don't know if that's possible to do, but it RENEE ST. JACQUES: We do have the NASS

statistics. But, other than that, there really isn't -- other than hearing from a lot of our farmers individually on difficulty with access.

I mean, if they're at the end of the street, a lot of the times, end of that road, they're not getting enough service. Or, if they are, that broadband service is unreliable, and they can't even go on their Facebook page to post to their customers, saying, This is what we have available today, or, on their website.

Things like that is really important.

So that would be a good thing, moving forward, to have some kind of statistics on what the economics of that situation really are.

SENATOR MAY: Yeah.

And then, last week, I read an article about

hi-tech in agriculture as a way of dealing with climate change and other uncertainties.

There were a lot of tools for farmers to figure out, you know, where to apply water, or where and -- where and when to plant their seeds, or whatever it is. And that it's all cloud-based.

And so my question was: How do farmers get access to that if they don't have --

RENEE ST. JACQUES: We can make all these tools, but...

SENATOR MAY: -- yeah.

So I was wondering if you have heard that from New York farmers, because this was all about the Midwest, basically (parties cross-talking) --

RENEE ST. JACQUES: Definitely.

We've definitely heard it, about the -having those tools available, but they cannot use
them where they live and where they operate their
farms.

That's also comes in the question of cellular service, because some of these -- these things you can use, these tools that you can use, out in the field are -- you know, they can't -- they can't use them and benefit from them.

So that also comes into an issue.

And, definitely, I think -- I've been trying to write down every time a farmer calls me and gives me a different example of what their problem or issue is when it comes to broadband access, but also the cellular capability as well.

And just keeping that list going.

But it's difficult to put that into numbers, for sure, I think.

SENATOR MAY: Well, I think we would love it if you would share the list with us as you're putting it together, because that kind of information is really helpful.

RENEE ST. JACQUES: Definitely can do that.

SENATOR METZGER: And the potential is just so great for managing pests, for reducing the cost of inputs. It's huge.

And, also, just access to information too, about, you know, seed varieties, research, and all the rest.

There's a lot --

RENEE ST. JACQUES: Most definitely.

SENATOR METZGER: -- you can miss out on.

RENEE ST. JACQUES: Agreed.

ASSEMBLYMAN SANTABARBARA: And just to -
I want to thank you for your testimony today.

2 3

And I think that's -- that's something

I highlighted, that the unique -- the uniqueness of some of the needs. Like, you know, who would think some of the equipment or some of -- some of the tools are now connected, as the Senator said, to the cloud. And they can't really function without having this connectivity.

I think that's an important point because, when we think of farming, people don't tend to think of that kind of technology being applied.

But technology has really changed the way farms operate.

Also, there's a trend that you're probably aware of, that have we're losing farmland.

So I think some of it does come down to people that -- farmers that live out in these communities, it comes down to quality of life a little bit too, because, if you're running a farm, you have big property.

So when it comes to quality of life, you know, you're not connected to the Internet, you don't have basic technology.

A lot of it is just quality of life, in general, in the rural communities where a lot of these farms operate.

So we have to keep that in mind as well, as 1 impact, as we go forward and try and make sure that 2 our farms continue -- continue to thrive. 3 RENEE ST. JACQUES: Agreed. 4 And we would love to be part of that 5 6 conversation, and just to keep sharing these 7 different unique aspects of farming that, as we go forward, make sure those are not lost as we're 8 9 trying to find a way to get broadband to everyone in New York. 10 11 SENATOR METZGER: So I'd be interested to 12 talk with you, perhaps, about a survey that we could 13 do of farmers, of broadband access. 14 RENEE ST. JACQUES: I think that would be a 15 great idea. 16 SENATOR METZGER: That would be really 17 interesting. 18 RENEE ST. JACQUES: Definitely. SENATOR MAY: Thank you so much. 19 20 RENEE ST. JACQUES: All right. Thank you. 21 SENATOR MAY: And last, but not least, 22 Taier Perlman. 23

Thank you for being here, and for holding out till the last minute.

24

25

ASSEMBLY MEMBER THIELE: The patience of Jobe

right here.

TAIER PERLMAN, ESQ.: Yeah, yeah, the stamina that you guys have all displayed has been amazing.

Well done.

Okay, so, given that I'm last, but not least, I'm going to keep my remarks short.

I crossed out a lot of portions of what I was going to say because it was already said.

I'm kind of taking a new direction here, because what I'm going to be speaking about is the impact that the shortage of rural broadband has on the legal profession, and the administration of justice in New York State, and how that affects rural residents.

My name is Taier Perlman, and I run the Rural Law Initiative out of the Government Law Center at Albany Law School.

The Government Law Center's mission is to provide research and analysis to state and local governments and policymakers, so that they can better serve their communities.

And, specifically, the Rural Law Initiative work has included research on some of the important challenges that rural communities are facing.

I'm also the co-chair of the New York State

Bar Association's Rural Justice Task Force.

What we're charged with doing is identifying viable solutions to support rural law practice and greater access to justice for all of New York's rural communities, including making recommendations for changes in law and policy.

This task force is comprised of rural lawyers, members of the judiciary, legal-service organization leaders, and invested stakeholders from around the entire state. There's 33 members in total.

And we all unequivocably agree that the rural broadband and telecom gaps in rural communities is one of the primary challenges of rural practice.

And it's not just for our profession, obviously, but it's also for all the rural residents we serve.

Without lawyers and a well-functioning judicial system, the rule of law is not a reality.

People in rural communities depend on lawyers and the courts to help them start businesses, make contracts, hire employees, resolve disputes, and pass their property on to their children.

Also, lawyers are instrumental in rural economic-development efforts, and getting deals

done, and negotiating contracts and partnerships.

Our research is showing us that there's a palpable failure in our legal system's ability to deliver justice for all New Yorkers, and part of that reason, is the failure that rural communities don't have technological capacity to support the efficient administration of justice.

Rural law practices, town and village courts, and the rural residents they serve, are being left behind due to the broadband and telecom gaps.

And this shouldn't be happening.

This lack of access to technology means that our legal system, which is increasingly built upon assumptions of access to technology, just isn't working.

Lawyers can't file their documents electronically, which many courts now require.

Lawyers and clients can't communicate by video conference.

And lawyers have to spend more time driving across long distances, as well as their clients, when they have to meet with them.

Legal research can only be done online, and that's incredibly difficult for rural lawyers, and for people who can't afford lawyers.

So, basically, learning about the law is effectively impossible or incredibly difficult in rural communities.

If lawyers can't take advantage of new technology to streamline their practices, they fall behind in the competitive market for legal services, which means their clients do as well.

And if our local courts can't take advantage of new technology, everyone who depends on it suffers from the inefficiencies that result from that.

All of these problems get worse over time, as the lack of technology makes it harder to recruit new attorneys to take over the law practices of attorneys nearing retirement, which, by the way, is three-quarters of the current rural practitioners in upstate rural New York communities. They're on the verge of retirement in the next 20 to 30 years.

The failure to keep up can then become a downward spiral.

Between August and October of 2018, the Government Law Center conducted a survey of rural practitioners across New York State.

This was the first-of-its-kind effort to quantify and qualify the growing shortage of legal

practitioners that was being anecdotally reported from the field.

This research has been memorialized in a report entitled "Rural Law Practice in New York State," which is now publicly-available online.

And many lawyers reported that rural broadband and telecommunication failures were one of the primary challenges to rural practice.

I'm now going to read a few quotes that came out from our survey. These are direct qualitative responses that came back to us.

Not going to read all of them. I cut a bunch of them out.

When asked about the challenges of rural practice, one respondent said, "Researching cases with horribly slow Internet service, and trying to conduct business without effective cell phone service, is one of the greatest challenges to practice."

This is another one:

"We need better communications, like digital services, Internet access, et cetera, for all purposes.

"Enhanced technology and better access to affordable technology for the school districts in

rural settings is also needed."

2 Another one:

"Fewer services for clients. More driving travel. Difficulty for some clients to get to appointments. Courts should permit video appearances for attorneys or parties when the appearances for a status review are simply for scheduling purposes.

"This would allow parties to make appearances without unnecessary travel or missing work or needing to find child care.

"It would also allow attorneys to meet the clients' needs without excessive travel costs or billable time."

Another one:

"Many clients have no phone service or limited minutes, and few have computers or Internet service. It can be very difficult to communicate quickly."

There are many other such quotes that came out of this rural practitioner survey, but I'll stop there.

SENATOR MAY: Okay.

TAIER PERLMAN, ESQ.: And this goes back to the earlier point, but one of the most significant

findings from our survey of rural practitioners, is that 74.3 percent of them are at retirement age or soon approaching it.

Rural communities are dealing with a rapidly (indiscernible) with no viable successors.

Most new attorneys gravitate to urban and suburban areas, leaving the time-tested and true small-town lawyer out.

The rural broadband and telecommunications gaps prevalent in Upstate New York only exacerbates this problem.

Why would a newly-minted attorney open up a modern-day law practice, or take over one, in a place that doesn't have reliable and effective broadband and telecom services?

It just wouldn't make sense for them.

And how about the rural practitioners that are out there today?

It's not just a question of practicality.

The rule of law depends on judges, lawyers, and everyone else being able to learn and understand the law.

Knowledge of the law, like everything else these days, is something we get online.

Without access to broadband and

telecommunication services, the quality of lawyering will go down, which means the quality of justice will go down.

The rule of law in 2019 is online, and communities that aren't online don't get to be a part of that.

The fair and equal administration of justice demands that rural broadband and telecom services be effectively available for all New Yorkers.

And I'm very grateful that you all agree with that, and are making the effort to push this issue forward.

So thank you very much for your time.

SENATOR MAY: Thank you.

That was a whole different perspective that's really important to hear.

And I will just say, it also extends to rural health care, and number of other areas that we didn't hear about today.

But it's great that you brought this up because, especially in professional work, it's really hard to do it now if you don't have this basic connectivity.

SENATOR METZGER: And, also, there's the direct connection to your professional work, but

1 there's also just attracting professionals to rural 2 areas. 3 And it even, you know, extends to nursing and other occupations that we have shortages of, if, you 4 know, we need to have these services to attract 5 6 them, for their quality of life. You know. 7 So... TAIER PERLMAN, ESQ.: Yeah, this cuts across 8 all professions, all industries. 9 But without the -- without the broadband and 10 11 telecom services, you're not going to incentivize 12 new professionals to come out to these places. 13 So, it's definitely great that you understand 14 that. 15 SENATOR MAY: Well, thank you, and thank you 16 for bringing the specifics. 17 SENATOR METZGER: Yeah, it's helpful. 18 ASSEMBLYMAN SANTABARBARA: Thank you. 19 SENATOR MAY: All right, I guess we're 20 wrapping up. 21 So I just want to belatedly thank my staff 22 who put all this together. 23 Eric Vandervort, who worked with everybody on the -- on this list, and did an amazing job. 24

Zach Zeliff and Hal McCabe (ph.) have been

25

running things here in -- in the office, and --1 I mean, in the room. 2 And, Kristin Williams, wherever she is, 3 working behind the scenes. 4 And the tech staff here, you've been 5 wonderful. 6 7 The sergeants-at-arms who were here, thank 8 you. 9 And everybody who stayed, or even was here for part of the day, it was really a great hearing, 10 11 and I'm grateful to all of you and to my colleagues 12 up here. 13 Thank you so much. SENATOR METZGER: Yes, I second that, thank 14 15 you. 16 ASSEMBLYMAN SANTABARBARA: (Inaudible.) 17 SENATOR MAY: What do I have to do? 18 ASSEMBLYMAN SANTABARBARA: "Meeting's 19 closed." 20 SENATOR MAY: Oh. 21 Meeting is closed -- the hearing is closed. 22 23 (Whereupon, the Legislative Commission on 24 Rural Resources concluded, and adjourned.) 25 ---000---